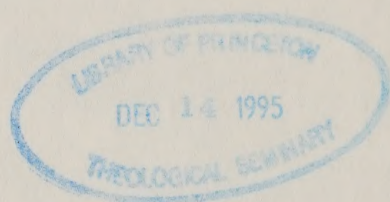


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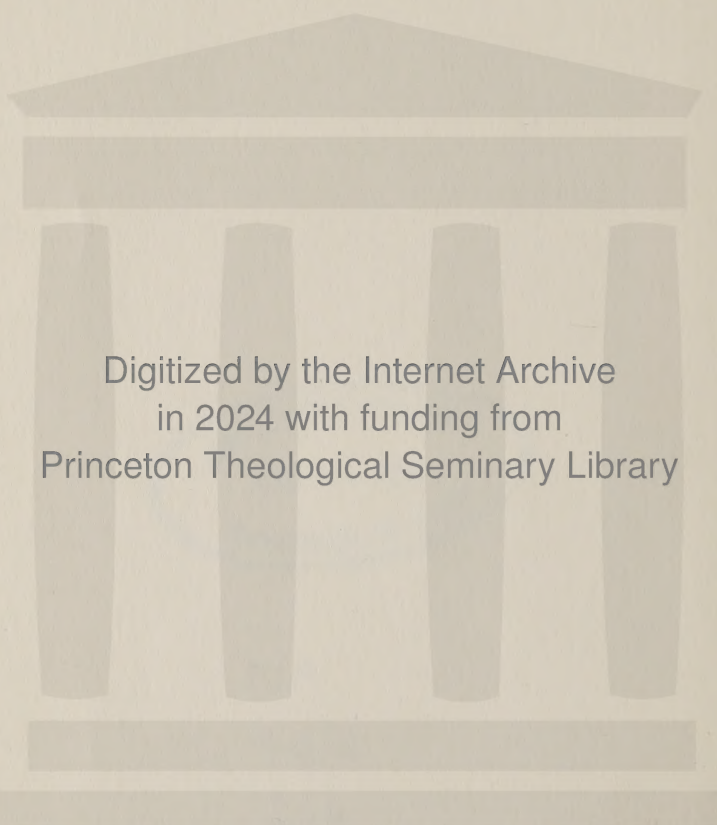


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The
**CHURCH BUILDING
GUIDE**



"I propose to build a house unto the name of the Lord my God"

ELBERT M. CONOVER
THE INTERDENOMINATIONAL
BUREAU OF ARCHITECTURE

The

CHURCH BUILDING GUIDE

By Elbert M. Conover

Director of the Interdenominational Bureau of Architecture;
Director of the former Bureau of Architecture of the
Methodist Episcopal Church.

Author, BUILDING THE HOUSE OF GOD (1928)

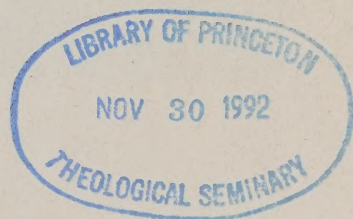
BUILDING AND EQUIPMENT FOR CHRISTIAN EDUCATION

PLANNING CHURCH BUILDINGS

BUILDING FOR WORSHIP

CHURCH BUILDING FINANCE

PLANNING THE SMALL CHURCH, Etc.



- CROSS-LAMBEAU -



- THE AGNUS DEI -



OUR SAVIOUR -
THE AGNUS DEI -
DANNER OF VICTORY -



- THE FISH -
- WITH IXΘYC RESUS -

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The Interdenominational Bureau of Architecture

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The Cathedral of Salisbury.

Rising in beauty and majesty above the Plain of Salisbury, the Cathedral marks one of the highest stages of Christian achievement.

Some, for the Glory of Christ wrote great music; sang inspired hymns; painted pictures that witness; lived the lives of Confessors; brave the death of Martyrs; served with hearts filled with Devotion.

Others built to His Praise and Glory hymns of praise in stone which also gave shelter and inspiration for Divine Worship.

Salisbury Cathedral was built rapidly from 1220 to 1258. The spire, 404 feet high was added, 1335 to 1375.

THE CHURCH BUILDING GUIDE

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I CHURCH ARCHITECTURE AND CHURCH WORK

We cannot have an effective Christianity without the church and the church building. Jesus said, "Where two or three are gathered together in my name, THERE am I in the midst of them." We cannot even pray the Lord's prayer by ourselves alone. We must come together and say "Our Father...." Again Jesus said, speaking of the Lord's supper, "This do in remembrance of me." This means that we must have a place where we can gather for this most important and sacred exercise.

The church building program should enlist the interest and sacrificial devotion of the entire congregation of the local church. It is an endeavor that should be the means of unifying the congregation and of enriching its religious life and effectiveness.

If you serve on a building committee, if you offer helpful suggestions, or help collect materials, or volunteer to lift some of the stones onto the wall, if you subscribe to help pay the cost, or teach little children of the value of the House of God, then you are helping erect the church edifice and may well become informed concerning the many parts of this very notable enterprise, the building of a church. The church building has been one of the remarkable features of the whole Christian movement.

The House of God in the Christian sense began in the upper room which was prepared for the holy service which was held there. There they shared with Jesus the broken bread. There he washed the disciples' feet. There, in the upper room, one of the most exquisite events in human history occurred. There they heard Jesus sing!

The development of the American Protestant church building is a matter of great interest and significance. The church building, although sometimes over-shadowed by buildings devoted to commerce and pleasure, has grown to be a very notable factor in our American life. It is planned for comprehensive functions in the community. American churchmanship has not withdrawn from the world.

The EXTERIOR DESIGN has a very important purpose. It is a physical representation of religion in the community. By its presence and design the church building is constantly proclaiming the presence of religion among the people. The exterior design may not carelessly or irreverently be composed. It must instantly be recognized as a house of worship and center of religious exercise and service.

The plans of church buildings have been prepared to accommodate and facilitate the broad services of religious bodies of different states of education and culture. While the church building has expanded from the almost single purpose worship sanctuary, now, in keeping with the expanded program of the seven-day-a-week church, the exterior must indicate and testify to the three-fold work in worship, religious education and personal culture in the varied activities of fellowship and recreational programs.

In this book remodeling projects are assumed also to be church building enterprises requiring the same type of guidance and program planning.

We have, too, today, a new interest in the place of art in the work of religion. A certain idolatry of words, seems at times to have characterized Protestant Christianity. It has been assumed that a spoken or printed word has magical power in implanting true motivation in human character. Millions of books have been printed for every effective picture — sometimes, one picture may be worth a thousand words. Too often, the dramatic appeal and the effective influence of Christian art has been ignored and a great treasury of inspirational power remains unused.

At this time, in 1947, hundreds of millions of dollars worth of new Protestant church buildings and improvements are being planned. This is an enterprise of tremendous proportions and supreme importance. To accomplish it satisfactorily will require devoted leadership on the part of church executives, ministers, people, and architects and craftsmen. Most of these buildings will be erected of enduring materials. They can prove to be serious handicaps to the ongoing work of the church, or they can greatly facilitate the holy work essential for sane and safe living in these coming years.



French Parish Church (Vatteville)

Romanesque Nave — Gothic Choir

A practical book on church building would fail indeed if it did not recognize the continuing stream of the church building enterprise through the years of Christian history. Before taking up the task of planning our own church building or improvement, let us then in our congregations, church school classes, youth groups, and other groups, and individually, steep ourselves in the thrilling history of erecting and embellishing the House of God throughout the Christian ages.



The English parish church where after a week of toil the people come for praise and prayer, holds a place in human life, in literature and art, that could be achieved only through ages of Christian love and devotion.

The bold tower proclaiming the invincible Faith of the Christian, its blending into the tuneful environment, the ivy mingling the strong stone walls with the peaceful beauty of loved nature, all produce a scene such as has inspired wanderers over the Earth, and Browning, to long to be in England again, and wandering far, to turn to God and Pray.

II THE CHURCH BUILDING IN CHRISTIAN HISTORY

The smallest church building improvement enterprise is related to the ancient cathedral and to the far away mountain chapel in the great stream of Christian expression manifested in the church buildings erected throughout the ages of our blessed faith. The construction of a church edifice is not an isolated enterprise. It is a part of the continuous expression of a sublime faith as evidenced in the buildings erected for the worship of God.

It would be as pointless to attempt to write a lesson for a church school class while ignoring the New Testament, as it would be to plan a Christian church apart from what has already been achieved in this same great endeavor of which the little children's room at St. John's in the Dale is a part.

A knowledge of Christian architectural history helps one to appreciate the significance of his own task in a church building or improvement project. Our work in church building today is linked with the work of the great company of those who through the ages pursued this noble and inspiring calling. Our own contribution in the history of mankind and toward the working out of human high destiny cannot be worthy of our opportunity and position if we ignore the accomplishments of those into whose labors we are to enter.

The history of Christian architecture helps immeasurably to tell the story of Christian life. The chapels built under the ground in the catacombs where the Christian symbols on the walls pointed to the places where Christians could secretly and safely worship; the great cathedral at Chartres where people harnessed themselves to the ox-carts and drew across weary miles the stone which they later lifted into the walls of the great cathedral; the work of men and women of the University Methodist Church in Tulsa, Oklahoma, who on Saturday afternoons throughout seven years laid up the walls of that excellent building, all form thrilling chapters in the Christian movement, in which people of many climes and times toiled together in this holy endeavor of building the House of God.

Let us then survey, in the briefest possible manner, this inspiring movement of building the House of God through the Christian centuries. Yes, I know you want immediately to talk about the kind of roof to put on your new church building or whether there should be stained glass or clear glass or what kind of heating, or whether there shall be air conditioning. You want to get to work at raising the money for the new improvement. Well, raise money to the fullest possible extent and as soon as possible. But just be patient now for a brief time and revel in the fact that you are to enter upon a holy adventure. You are to help raise another steeple toward the sky in testimony that we believe in God and shall assemble together to worship and serve him. If you are to

write a sermon or Sunday school lesson, you will read and see what Jesus or St. Paul or Amos said about the things we wish to teach. Of course, there are some self-sufficient, all-knowing people who display their intolerable impudence by ignoring all the past achievement. Such persons do the same in music and we get noise; in art, and exhibit the evidences of a distorted brain or what some people have in place of a brain.

Some will wish to read much farther than this very brief and sketchy survey. You will want to read the fascinating pages of Short in his book "The History of Religious Architecture" or in Bannister Fletcher's "A History of Architecture" filled with hundreds of illustrations. Neither of these great books uses technical language.

The history of Christian architecture begins in the prepared upper room. A table was there, the first and most important piece of church furniture. Other fitments were there. Or come to the chapel in the catacombs. There the sarcophagus of a martyred saint is used as the altar.

But to catch the thrilling spirit of religious architecture, we must go still further back, back to 3700 B. C. at least, or even back to the altar which Jacob formed of one of the stones that had been his hard but comfortable pillow. The temples of the ancient Egyptians with massive halls and columns and low mysterious chambers and shrines indicate the interest of the ancients in providing a dwelling place for their gods. Rutter, in his book "The Poetry of Architecture" calls this the period of fear in architectural history. The Temple of Ammon at Karnak—1550 B. C.—323 B. C.—has a marvelous hall whose stone roof is supported by sixteen rows of great columns terminated by capitals of the lotus-bud type. The massive scale of the temple, the forest of columns, and the clerestory lighting scheme produce an awe-inspiring effect. At Baalbek, Syria, blocks of stone used in the temple of the Sun measure 60 feet by 12 by 12 feet.

In Babylonian architecture of a later period, large mural pictures were formed of enameled brick of various colors. The Persians 536 B. C. to 430 B. C. built palaces of splendor and majesty rivaling the vast marvels of the Nile valley. Probably because of the outdoor worship of fire and sun, temples were of small importance to them.

The Hebrews lavished their architectural ability upon the Temple and the masonry required to give it the great supporting platform. The careful directions given for building the Tabernacle and the wonderful description of the organization for building the Temple and its elaborate service of dedication indicate the importance of religious buildings in the minds of Old Testament leaders.

The accomplishments of the Greeks and Romans must be noted because their work definitely influenced Christian architecture. The Greeks aimed at perfection in whatever they undertook in the world of art. Their architecture exhibits perfect adjustments of the elements they employed. They did not assail the heavens with the refinements of the arch and vault nor attempt to carry roof thrusts with the flying buttress. The Parthenon, the masterpiece of Greek architecture, is faultless in design. The refinements of its detail and the beauty of its sculptural treatment wonderfully illustrate the high standard architecture reached in its construction.

ROMAN ARCHITECTURE

The Greek influence in Rome is quite evident in its architecture. The Roman builders lacked in fine artistic expression but excelled in the genius of organization. They brought engineering into the service of architecture and employed the arch and vault on a grand scale. The principles of Roman architecture became the source of the Romanesque order and vitally influenced the Renaissance architecture. The era of Roman building left its impress throughout the far reaches of the empire from Asia to Britain. One must admire the beauty, symmetry, harmony and artistic correctness of the classic temples. But we cannot find in them sufficient expression of the aspirations and ideals of Christianity. They represent the natural beauty of the earthly and sheltered the idols of pagan ideals.

EARLY CHRISTIAN ARCHITECTURE

In all human history there is no record as striking as that of the rise of Christianity and the rapidity with which it was diffused throughout the civilized world. It has inspired the building of great monuments and gives in its architecture invaluable enrichments of human living. The persecutions and edicts of Roman emperors prevented the early building of Christian churches. Often the homes of the more affluent members of the Christian communities provided shelter for their meetings.

The Roman basilicas, or public civic buildings, provided the early Christian builders with rather practical examples for the early churches. Old columns and material from the ruins of ancient buildings were used. The basilican style of church generally had a lofty nave separated by rows of columns from single or double side aisles with a clerestory wall pierced by windows. The term "basilica," designating a building dedicated to the service of the King, was applied to Christian churches in the fourth century, the implication being that these buildings were devoted to the King of Kings. In early Christian times church edifices were called *domus dei*, meaning "The House of God," *domus ecclesiae*, "house of the church," *domus columbae*, "house of the dove," *oratories*, "houses of prayer;" or *maturion* "memorial to a martyr."

An end arcade called the narthex was used by the penitent or those who wanted to hear the Gospel but had not entered church membership; at the further end was the sanctuary or apse. The sanctuary provided space for the choir with two reading desks or ambones, one for the gospel and one for the epistle. It was inclosed with low screened walls called cancelli, from which we get the word "chancel." Sometimes a triumphal arch marked the beginning of the sanctuary. Wherever possible the Christians decorated the churches in an elegant manner with mosaics, paintings, and fine marbles. The earliest churches faced the East.

Baptistries were built in some places as separate buildings, usually one baptismal for a city. The baptismal of Constantine in Rome (430 to 440 A. D.) is octagonal, the roof being supported by a two-story ring of fine marble columns taken from old pagan buildings. After the sixth century baptistries were generally replaced by a font in the church vestibule. This position is still recalled in many modern churches by placing the font near the entrance indicating that the baptism marks the entrance to the church fellowship.

Since the primitive Christians washed before entering the church, as a symbol of purity, a vessel for the purpose was placed in the porch. Baths were important appendages to the larger churches.

The campanile, or bell tower, dates from the early Christian period. There was a wide use of pictures, emblems, and symbols to represent the various aspects of the Christian faith. Fine ornamental work in ivory and precious metals was used on chalices, patens, crosiers, and other appurtenances of the Christian ritual.

BYZANTINE ARCHITECTURE

Byzantine architecture developed after Constantine in 324 A. D. transferred the capital of his empire to Byzantium. Both brick and stone were used in the mortar, much of which still remains. The dome became the significant feature of the buildings, sometimes many domes being placed over one structure. Brickwork was used in various patterns and bands. Internal surfaces were covered with marble, mosaic, or fresco decoration.

The outstanding example of Byzantine architecture is Santa Sophia (Holy Wisdom), the cathedral of Constantinople (Istanbul) built 532 to 538 A. D. by Justinian, who exclaimed, "I have surpassed thee, O Solomon!" The building is dominated by a great dome rising 180 feet above the ground. High enough to erect an 18 story building inside. The interior glows with wondrous beauty of colored mosaics, marble columns, and ston of many colors. Several other fine churches were built in Constantinople. The Byzantine influence is noticeable in Saint Mark's Cathedral, Venice, one of the most remarkable and famous edifices ever erected. It was founded in 864 A. D. and rebuilt between 1071 and 1402. It has five domes; the central one is forty-two feet in diameter. The interior is decorated in gorgeous marbles and mosaics; the front with 500 columns of fine marble.

THE INFLUENCE OF THE BYZANTINE ARCHITECTURE

Byzantine Christianity erected a bulwark against Huns, Goths, and Saracens until through internal faults, his civilization went down before the Turks in 1453. The style influenced the Saracenic and Armenian and then the Russian architecture. Western and northwestern Italy and parts of France and Spain felt its influence.

The Byzantine order is not extensively used as an inspiration for modern building. The Westminster Roman Catholic Cathedral in London (1895—) is one example; also, the wonderful Sacre Coeur Church overlooking the city of Paris.

EARLY ARMENIAN CHRISTIANITY

From the sixth to the thirteenth century the Armenians built notable churches and monasteries, several of which were founded by Saint Gregory. A concrete and stone domical church built in the seventh century still exists (Saint Gaina). The church law demanded that only a bishop, orthodox in faith, could design a church. All other plans must be destroyed unless submitted for approval, revised, and resubmitted: "thus shall the designing of the church be blameless."

EARLY MEDIEVAL AND ROMANESQUE ARCHITECTURE

The expectation that the year 1000 would witness the end of the world, and the troublesome times generally, prevented any considerable building for a long period. But later a writer said that the world seemed to be putting on a new white robe of churches. The monastic orders were responsible for a tremendous development in building. Their establishments required churches, cloisters, refectories, infirmaries, guest houses, work shops, gardens, etc.

As the nations of Europe developed, the architecture in each country took on certain definite characteristics, while a decided and notable Christian influence dominated the whole.

The Romanesque style is marked by the round arch and massive construction. The dome of the Byzantine was sometimes retained as in the cathedral at Pisa (built 1063 to 1092). In the Romanesque, there is a combination of the basilican and the Byzantine types with the rounded arch, exterior arcade work, and other elements developed during the awakened artistic life. The plan of the cross was often the basis of the Romanesque floor plan.

During the Romanesque period there was a development of building crafts and lodges, or guilds. A lodge of freemasons would work on one building for decades. In one instance a family of masons worked on the same cathedral for two hundred years.

Some excellent examples of the Romanesque: Saint Miniato, Florence, 1013; raised chancel similar to early basilica; marble columns taken from earlier buildings; wooden roof richly decorated; black and white marble exterior. Saint Ambrogio, Milan, 1140, founded by Saint Ambrose, fourth century. Here Saint Augustine was baptized. Lombard kings and Germanic emperors were crowned here. Finely ornamented pulpit or ambo, an interesting atrium, or outdoor court. Saint Zeno, Verona, 1139; a great rose window, clerestory, detached campanile with alternate course of marble and brick with high pitched roof. Saint Michele, Pavia, 1188, the baptistry at Cermona, 1167, and many other examples of this wonderful advance in church building and art, should inspire one to enter upon a more extensive study of the Romanesque period. Monreale Cathedral, in Sicily, 1174, is one of the most glorious examples; a combination of the early Christian basilica and the Saracenic influence; it has an eastern apse with raised choir. The interior walls are richly covered with mosaics representing biblical scenes and there are marvelous cloisters, remains from a Benedictine monastery.

Christianity, like Roman civilization, marched along the great highways of France. Romanesque architecture in France extended from the eighth to the twelfth centuries.

In France, the Abbaye-aux-Hommes at Caen, was established by William the Conqueror in 1066. It is one of the many fine churches in Normandy resulting from the prosperity of the Norman dukes. There are nine spires; these and the vaulting and other elements indicate approaches to the Gothic style. In Caen, 1083, the wife of William the Conqueror founded the Abbaye-aux-Dames, another excellent example of the rounded arch construction. At Cluny the Abbey Church (1089-1131) is the longest in France. It has a chevet (or crown) of five apsidal chapels. Poitiers and Saint Sernin in Toulouse, and many other inspiring buildings marked the stages of the Romanesque culture in France. Worms (1110-1120) with twin circular towers, the Church of the Apostles in Cologne (1220-) are outstanding examples of the Romanesque in Germany. In this year of Grace 1947 we have not been able to learn whether any of these have been damaged or ruined during the war.

SUMMARY OF THE ROMANESQUE ARCHITECTURE

The Romanesque movement was strong between the decline of early Christian art and the rise of the Gothic (about 1000 to 1200 A. D.) While Roman in origin it included features drawn from Byzantium, Sicily, Moslem-Spain, Armenia, and Mesopotamia. It is characterized by massiveness, heavy walls without buttresses, round arches, and highly ornamented doorways. It represented the church at a period of great power and prosperity.

THE RISE OF THE GOTHIC ARCHITECTURE

An age of religious enthusiasm found its noble expression in an architecture evolved and developed in a most fascinating manner. Country, clime, and circumstance affect this expression, but there seemed always to be a driving force and compelling spirit in man that expressed itself in this ever aspiring architecture. The freedom of the French communes found the massive walls of the Romanesque inadequate to express the surge of ideals and emotions which were stirring the people with an almost fanatic religious energy. Ever striving for the noblest possible expression in the greatest of arts—architecture—which commands the service of all the arts, men raised vault and spire to the highest point of refinement, seeming to defy the force of gravitation until they ventured too much and at Beauvais, in 1294, a great vaulted choir crashed to earth. (The present glorious transepts and choir of Beauvais with a "halo of chapels" were built from 1225 to 1568).

"The Gothic Cathedral," says Short, in the book, *THE HOUSE OF GOD* "expressed the energy which drove all western Europe to the crusades and created the great orders." Schopenhauer spoke of Gothic architecture as having a mysterious and hyper-physical character indicating "unknown, unfathomed, and secret ends."

The term "Gothic" came into use during the eighteenth century as a term of reproach used by those who, Dr. R. A. Cram says, were "self-sufficient amateurs of the Renaissance" and applied this term "to an art they had inherited but could neither appreciate nor revive." It describes the work of several hundred years in the development of design, structure, and plan into one glorious unit. As compared with the Greek temple it soars and aspires above the merely earthly as the Christian faith aspires to the Eternal. The dominating line of the Greek temple is horizontal, whereas the dominating line in the Gothic is vertical. The Greek temple was a work of fine art, the Romanesque church a mighty fortress of imperialistic power, while the Gothic church is a *Te Deum Laudamus* in stone.

THE GOTHIC SPIRIT

Probably nothing in history has been more cruelly misrepresented than Gothic architecture. A contractor or untrained architect may build a church as stupid and soulless as an icehouse and then because it has a few badly designed and illy proportioned pointed arches, people call the building "Gothic." Many have tried to imitate ancient work without having sufficient taste and intelligence to copy the best examples, for indeed the Gothic had its decadent periods. To build truly in the Gothic spirit today one must enter into that mystic devout mood to express through his architecture the best of Christian ideals with a result which will be strictly modern and yet as really Gothic in spirit as the notable buildings of the thirteenth and fourteenth centuries.

Constructing in these times cold imitations of buildings erected hundreds of years ago indicates spiritual and cultural poverty. Many thoughtful people feel that the Gothic spirit in architecture more truly expresses the idealism, the ever upward striving of the Christian faith. If architectural design does not come from lives of devotion and courage, motivated by anti-materialistic idealism, we will have just uninspiring imitations rather than a revival of a noble art.

THE DEVELOPMENT OF THE GOTHIC IN FRANCE

In architecture we read the history of life. The religious fervor of the thirteenth century was manifested in France by the opposition to the Saracens, by the crusades, and by the erection of many great cathedrals. The tremendous building activity wrought a transformation in the appearance of the country comparable to the time when Europe was first covered with railroads. The Gothic period in France lasted approximately from 1160 to 1500 and began notably with Notre Dame in Paris (1163-1235), a magnificent church sometimes called the tomb of the Romanesque and the cradle of the Gothic. Its splendid rose window forty-two feet in diameter is only one of the many marvelous features of this great building. See "The Biography of a Cathedral" by R. G. Anderson (1945), 496 pages. Other examples of the French Gothic work of about the thirteenth century are: Amiens, full of splendor with marvelous carved woodwork; Laon; Rouen; Beauvais (1225-1568); Bourges (1190-1275); LeMans, with a Romanesque nave and vast choir and a chevet with thirteen fine chapels; the church of Saint Louis in Paris and Saint Chapelle, where one has the sensation of being inclosed in a great jeweled casket. Rheims (1212-1241) was the coronation church of the kings of France and the center of French history for two hundred years. Its rose window is forty feet in diameter. The nave is grand in the extreme. There is a chevet ring of five chapels. Although struck more than two hundred and fifty times during the World War I, its wonderful and glorious glass blown out and the roof destroyed, the walls remained intact.

The visitor to France should not fail to visit the Cathedral at Chartres, one of the superb witnesses of heroic devotion to a sublime enterprise. Here the glorious glass remained intact throughout almost the entire building down to modern times. Copies of some of these exquisite windows are in the Riverside Baptist Church, New York.

During the building of the great French cathedrals and churches the craftsmen and master masons occupied well-recognized positions in the work and came to supplement the work of the trained monks who devoted their lives to the building of the House of God. In the windows at Chartres there are pictures of these builders at work and in an old record we may read "Jean, son of Vital, the clever and faithful carpenter of the church, who always worked with love and zeal at the work of this church."

CHURCH OF ST. OUEN, ROUEN

This exquisite hymn in Gothic was begun in 1318
and finished 170 years later.

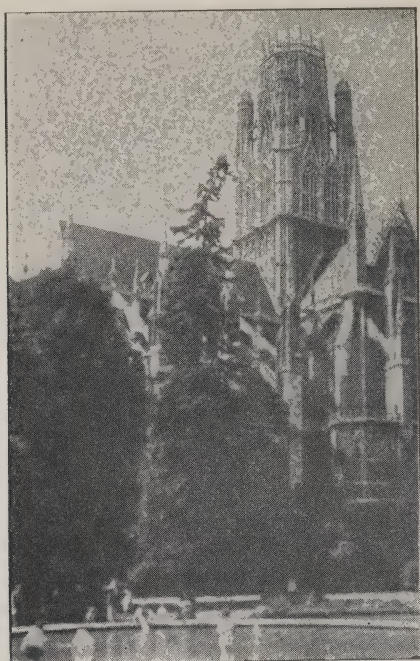


PHOTO BY AUTHOR

GOTHIC ARCHITECTURE IN SPAIN

The Gothic order, though modified in this interesting and mysterious country, reached a remarkable stage of development. It was much influenced by the French. On account of the climatic need for small windows and thick walls, some large Gothic windows were later blocked up. Everything Moorish was considered repulsive to the Christian, but the Moorish influence is evident in excessive ornamentation. The history of Spain as indicated by its architecture gives a view of the people different from that received from a history written only regarding the intrigues of politicians and wars of the kings and dictators. The Spaniard considered himself a valiant champion of Christianity. In her churches Spain raised a bulwark against the Saracen. But when the church allies itself with greed a wonderful art will not save it.

In Seville the people said "Let us build such a vast and splendid temple that future generations will say of the men of Seville, 'They were mad.' " Bishops and clergy gave half of their living to the building fund. The enterprise resulted in the third largest church in Europe. In Toledo (1127-1493) there is wonderful glass,

beautifully carved choir stalls, five aisles and several side chapels. Barcelona, with Chevet of nine chapels and fine cloisters, was finished in 1450. Gerona (1015-1458), with the widest Gothic vault in Europe, and other cathedrals, churches and chapels, compel our admiration.

IN BELGIUM

Antwerp Cathedral (1352-1411) is the most significant church in Belgium. Its tower, 400 feet high, is marked by the more flamboyant style of the later period in Gothic (1422-1518). Brussels-Saint Gudule is 362 feet long. Unfortunately the World War I, terrible devastator of art, culture, and all fine reality, demolished the cathedrals at Ypres, Milanes, and scores of churches. In Tournai (1066-1338) we find three stages of construction illustrating three periods; the nave in Romanesque, the transepts of the transition, and choir and chevet fully developed Gothic.

In Holland, the Dutch love for simplicity gives us a less varied architecture. Haarlem and Utrecht Cathedrals plainly built of brick, illustrate a dislike of color and ornament and lack inspiration.

GERMANY

Germany rather tenaciously held to Romanesque methods with massiveness and low proportions, but French models finally dominated. German builders developed great skill of handicraft, displayed in intricate window tracery and complex moldings.

Cologne Cathedral, a magnificent example of the romantic in architecture, was French in plan and illustrates the leading characteristics of several notable French churches. Begun on a tremendous scale in 1270, it was completed on the original design in the nineteenth century. It covers 81,000 square feet, has two towers, each 500 feet high, and survives world War II, at the cost possibly of American lives.

In Austria, Saint Stephens-Vienna, 358 feet long is the outstanding example.

SCANDINAVIAN buildings exhibit plainness, simplicity, and solidarity.

ITALIAN GOTHIC

Because of the lack of national unity during the great period in Gothic building, there was no general development of the Gothic in Italy. It was merely an imported fashion from 1200-1450. The brilliant climate demanded thick walls, small windows and flatter roofs, but, the classic tradition prevented any high development of the Gothic before the Renaissance influence prevailed.

Milan (1388-1485), which next to Seville is the largest mediaeval cathedral, is a gleaming mass of white marble with lofty tracery windows, flying buttresses and hundreds of pinnacles, it is thus characterized by Tennyson:

"O Milan, chanting quires
The giant windows blazon'd fires
The height, the space, the gloom, the glory
A mount of marble, a hundred spires."

Here at one time 250 stonecutters were carving pillars and pinnacles. There are more than 3,000 statues—many of heroic size. We could not today mobilize such an army of skilled and devoted craftsmen as were employed on the scores of churches arising in Italy during the fourteenth and fifteenth centuries.

FLORENCE

In Florence, in 1296, the city council decreed that a church worthy of their beautiful city and of their great God should be constructed. The marvelous dome, indicating the beginnings of the Renaissance, was designed by Brunelleschi. The Campanile, by Giotto, 275 feet high, paneled with beautiful colored marble, and the great doors, are outstanding features.

Lorenzo Ghiberti (1378-1455) spent fifty years making the marvelous bronze doors of the notable baptistry at Florence.

We cannot venture even to list the notable churches of Italy and the wealth of art work in pulpits, baptistries, doorways, altars, monuments, screens and other objects of religious art without number.

THE RENAISSANCE

This great humanistic movement, the Renaissance, traceable in great part to the enthusiastic study of the classics, did not mean an improvement in Christian architecture. The stamp of the classic and its close relation to pagan art make us question whether the Renaissance style is the most appropriate for expressing Christian idealism, although possibly suitable for civic buildings if we must continue to imitate rather than create. The style quickly arose in Italy, where the Gothic had not gotten a firm hold.

The culmination of Renaissance architecture was reached in Saint Peter's, Rome, begun in 1506, completed in 1604. Twenty architects worked on the building at different times. Michelangelo was at one time the master of the works. The nave is 650 feet long, the lantern 405 feet high. While stupendous and overwhelming it lacks the finest proportion and scale.

The Renaissance in Italy was followed by a period full of extravagance and ostentation known as the Baroque and Rococo period. Unfortunately, this period of bad taste lasted two centuries, with here and there an exceptional and commendable example, such as Santa Maria della Salute in Venice (1631). During this time some excellent churches were cruelly remodeled. It was fairly demonstrated that a revival of classic art could not succeed.

In France the Renaissance architecture appeared about 1475, but church builders clung more tenaciously to the Gothic. The Chapel of the asylum for veterans, des Invalides, now the burial place of Napoleon, is a masterpiece of Renaissance architecture. The domical church of the Pantheon in Paris, begun in 1755, with a dome 265 feet high, while impressive, may be characterized as coldly and mechanically perfect in its classic style.

In England the Renaissance development was partially due to the employment of Dutch and Italian artists. Inigo Jones (1573-1652), called the English Palladio, almost venerated the Italian masters of classic design. The Palladian window in our American Colonial or Georgian architecture indicates the longevity of the influence of Palladio, an Italian (1518-1580).

The greatest successor of Jones was Sir Christopher Wren (1632-1723). The great fire in London destroyed the fine Gothic cathedral of Saint Paul's and many churches. Saint Paul's was rebuilt by Wren from 1675 to 1710, on the classic style. It is a massive and overpowering building 480 feet in length. The dome is 360 feet high. Saint Paul's has been criticized as lacking the finesse and good proportions one would find in well designed Gothic church. Many millions of dollars were expended in the 1920's in correcting and repairing structural damages, although it was built hundreds of years later than many notable Gothic cathedrals that are still standing. Wren was the inventor of the Renaissance type of steeple, and in many varieties it crowned most of the fifty-three churches built by him and has been imitated hundreds of times.

The Georgian period in England extended from 1702 to 1830. Wren's powerful influence was continued and extended to America in the so-called "Colonial" style. The Renaissance style required too much repetition and monotony. Even so great a man as Wren could not in this style reach the excellence of the Christian expression that had soared to such heights in the eternal quest of the Gothic spirit. We gaze with interest and wonder upon classic Saint Paul's, but we are moved to pray in Gothic Westminster Abbey.

There followed efforts to revive Greek and Roman architecture. We quote from Pope a part of his satire on the imitators of Roman architecture, "Fill half the land with imitating fools." "Load some vain church with old theatric stage" "'Tis a house but not a dwelling." Imitations of pagan temples do not properly house the ministries of the Christian church. Even down to recent times pagan eggs and darts, wreathes and scrolls "adorn" Christian churches.

The great advance in mechanical inventions, in applied science and in the use of iron and steel demanded new accomplishments of the architects. Extended and new means of transportation freed building enterprises from dependence upon local materials.

A Gothic revival with new studies of medieval work and particularly appreciative studies of the great Gothic work in England itself followed the attempted classic revival. From 1819 to 1856 several books exhibiting the principles of Gothic architecture were published.



Interior of English parish church. Note beautiful pulpit at left.

OUR HERITAGE FROM THE PARISH CHURCHES OF ENGLAND

England was adorned with parish churches that inspire admiration and thanksgiving for their excellent testimony to the Christian faith. Their towers and spires, redolent of devotion and sacrifice, rose above every village and stand out in silent beauty across the fields. Without splendor or pretension, they were built in pleasing variety of design, solidly constructed and individually effective. They show marvelous adaptation to their surroundings and the requirements of the site. Each seems possessed of a charm and personality of its own. Continually witnessing through the ages a faith in eternal realities, they impel us to build something that will outlast the temporary affairs of the community. They were not completed in six weeks and "dedicated free of debt—the most church for the least money in the county," but became living buildings. The parish churches are repositories of records in stone, wood, brass, and fabric, of acts of devotion through the years. In church building we see the greatest artistic achievement of the English race. Here art reached all the people. The village mason could build a church so that it would be a church indeed, and the carpenter could crown it with an honest roof.

In addition to their skill, the craftsmen contributed touches of devotion, seen in the ornamentation and use of symbolism. They were not merely workers at so many dollars per day—cogs in an industrial system—but individuals vitally concerned with the work they were performing. Men, women, and young people capable of handiwork expressed and recorded their devotion in the carving of woodwork, in the frescoes and pictures, in glass and embroideries. Their spirit is occasionally revived in building a church of native stones or logs.

The church, with its prayers and instruction through the Christian year, brought the people into touch with the Divine. Much of this ministry was associated with the various parts of the building. The porch, the door, the pavement, the pillars, the chancel, the pulpit, the windows and tower (or belfry) all spoke peculiarly of our holy faith. The "farmers stayed their plows when the bells rang for prayer."

The parish churches play a more important role in England than anywhere else. The manner in which they were designed and constructed has much to do with their permanence. The parish church always has been a vital center of the village life. A plow was kept in the tower for use on "plow Monday" when the first furrow of spring was plowed with the prayer and blessing of the church. The Church is open daily to all who wish to enter for prayer and meditation. This effective personality of the building becomes far less potent when the building is looked upon merely as a meetinghouse, open only on Sunday.

The consecrated churches and churchyards were regarded as holy ground. When heads and arms were being chopped off for relatively minor offenses, the church property provided for wrongdoers a sanctuary under certain defined limits. In times of siege the people found refuge in the tower, and goods were stored in the building itself. Valuables were placed in the parish chest for safe keeping. Then came the great modern insanity, World War II. Thousands of these sacred buildings were devastated.

The influence of the church on persons who became notable is admirably illustrated in the life of John Constable, whose picture "The Vale of Dedham," painted from the summit of a church tower, established his real fame, and appeared in several of his famous landscapes. Tennyson, whose father was a rector and his mother the daughter of a vicar, was greatly in love with the parish churches.

Many of the fine old churches were disfigured by later additions or "restorations" and "modern" improvements. Many things of wonder and beauty failed to survive the vandalism of those who in sorry ages thought that a thing of beauty was necessarily of the devil. Marvelous alabaster reredos work has been found built in a pig pen wall. Wonderfully carved stone and woodwork was desecrated and smashed.

III THE GLORY OF THE CATHEDRALS

The cathedral is the embodiment of the glory and triumph of the whole church. As a building, the cathedral indicates the greatest heights to which the church may aspire in a material way, material yet spiritual, for a cathedral is but a material manifestation of the spirituality of the true Church. Only by a visit to the finest cathedrals in Europe can one realize the tremendous and dazzling impression made upon the mind and soul by those magnificent structures appropriately characterized as "frozen music," the "Te Deum Laudamus in Stone."

THE GREATER CRUSADE

The world never experienced such an outpouring of architectural art and devotion as during the construction of the great Gothic cathedrals between 1070 and 1225 A. D., particularly in France and England. Men's minds seemed to be dominated by a concentrated, inspired, and overwhelming purpose. Cathedrals are not only amazing in themselves but they express a marvelous spiritual energy. It was said that in the building of the cathedral God taught a new manner of seeking him and drew to himself those who were wandering away. Boys and girls shared in the work, though there were, as always, those who complained that the money ought to have been given to the poor.

The cathedral is a record of the devotion and labor of many generations. In Winchester, England, we see work that was begun in 1079 by Walkelin, a Norman Bishop, and continued in succeeding stages until the sixteenth century and even later. At Exeter, one may see in the foundations remnants of Saxon construction! Every ancient building has a life history of its own. Many of the European cathedrals are overwhelmingly impressive by their very size. One can never forget the impression as he enters the soaring nave of a beautiful cathedral and looks down the marvelous vista through the choir and chapels. Winchester is 555 feet long. (How inappropriate to speak of ordinary parish churches as of "cathedral proportions!") From every viewpoint the glorious spire of Salisbury makes an indelible impression. Pepys wrote in his famous diary "so all over the plain by the sight of the steeple and at night-fall to Salisbury."

THE CATHEDRAL PROGRAM

The cathedral building came into existence to meet the needs of a definite program. The cathedral is the bishop's church situated at the head of the diocese. Here were located a group of ministers, each with a specific duty. The library, museum and school of music were important parts of the cathedral program. The cathedral was the great rallying center and vitalizing point. In modern times pilgrimages of school children and others are arranged and the young people are being instructed in the historical and religious glories of the great church.

HAS THE CATHEDRAL PROGRAM A PLACE IN AMERICAN LIFE?

Knowing the power of the cathedral in Christian civilization, we are led to ask, may there not be a place for it in American Protestant life? As a center of unity in which representatives of well-established churches would cooperate; as an expression of the finest religious culture and devotion in a city; as a stimulus to better architecture; and a center for great services of united worship and forceful preaching, the cathedral might be made a great asset in a modern city.

A PROTESTANT CITY OR COUNTY "CATHEDRAL" PROGRAM

By a "cathedral" in this connection we mean a "headquarters church" for the Protestant community, not necessarily a bishop's church. A Protestant headquarters or clearing house office is usually difficult to locate in some office building. Significant Protestant headquarters housed in a churchly building would command attention and provide a practicable means for effective work in many of the fields of Christian endeavor. This kind of cathedral would be the "seat" of the Protestant churches rather than that of a bishop. By the term "cathedral", of course, we do not indicate an ecclesiastical building of any certain size. We refer to the program of work which should, if at all possible, be housed in a very significant building. Here would be the ministers' and church workers' library and training schools, the choir school, and organ school with their libraries. Here would be training classes and institutes for workers and ministers. On Sunday afternoons there would be great services of worship and preaching and religious pageantry. The building would be used daily for services of worship. Some downtown churches, continuing at a poor, dying rate, might dispose of their properties, place their equities in the cathedral fund, and in return receive the use of a chapel in the cathedral plant. A cathedral would provide space for an art museum, missionary museum, museum of church history, etc. A great deal of church money has been invested in lodge and club buildings which have been dubbed "cathedrals", by what right it is difficult for a churchman to understand. Let the Church itself occupy this field of need.

A county cathedral, located at the junction of principal highways would prove to be as effective an asset to the territory it would serve as would a city cathedral. It must have ample grounds—a site of several acres. The Protestant Episcopal Church in New York, Washington and San Francisco and the Church of England in Liverpool are demonstrating that notable cathedral building, even though on somewhat traditional lines, is still possible.

IV FOUNDATION BUILDING IN THE UNITED STATES

Captain John Smith described the first church in the colony of Virginia as "A homely thing like a barne covered with rafts, sedge, and earth." "Yet," he wrote, "we had daily common prayer morning and evening, and every Sunday two sermons, and every three months holy communion." As the colonies became prosperous, more pretentious meeting houses and churches were constructed. In the South the churches frequently conformed to English traditions. Saint Luke's, Smithfield, Virginia, reminds one of an English parish church. In the middle colonies the meetinghouses of the Quakers, the churches of the German groups and of the Church of England and the Colonial or Georgian meetinghouses gave a greater variety of architecture. In New England the meetinghouse type generally prevailed. One must confess an admiration for these white meetinghouses with their spires rising among the green hills and an appreciation of their influence. But they were meetinghouses and marked a distinct break from the churchly order.

SPIRES AGAINST THE SKY

During the eighteenth century the influence of Sir Christopher Wren and Renaissance architecture was strong, giving us the so-called Georgian or "Colonial" style. Christ Church in Alexandria, Virginia, was designed by Joseph Wren, said to have been a descendant of the great Wren. An interesting feature of this church is the Palladian window. The old Polwick Church, near Mount Vernon an example of the early American rural parish church, was built in 1769 with the active aid of George Washington.

Some of the smaller churches have great interest, such as Gloria Dei, Philadelphia (1700), and Saint David's, Radnor, Pa. (1714). Christ Church, Philadelphia, stands for the best in American Georgian church architecture. It was constructed in 1727 from plans prepared by Kearsley, a physician, at a time when an appreciation of architecture was considered an element of culture essential to every gentleman. The building shows some influence of Saint Martins-in-the-Fields, London. A great Palladian window lights the chancel. The massive tower is surmounted by a graceful spire. Saint Peter's, Philadelphia, built in 1761, is another interesting example so far saved from the hands of "improvers." Saint Michael's, Charleston, South Carolina (1742), is believed to have been built from plans by James Gibbs, the noted follower of Wren.

Several old Moravian and Reformed churches have considerable interest. Many excellent examples of early American work are found in rural sections. In Springfield, New Jersey, the original church, built in 1761, was used as a storehouse by the colonial government while a barn was used for a church. A battle was

fought around the building in 1780. The present building was erected in 1791, the nails and shingles showing that they were made by hand. In the Swedesboro, New Jersey, the Episcopal church, built in 1784, is an excellent example of Georgian architecture with a Palladian east window. Two miles south is an old Moravian building and two miles north a stone church built by the Methodists under the direction of Francis Asbury, their first bishop. The old ship meetinghouse in Hingham, Massachusetts, was framed by ship carpenters in 1680.

It is not possible to list all the notable colonial and early American churches. They are worthy of more extensive study than has thus far been given them. They evidence the ideals and habits of the people. They had an interesting diversity of style but with a strong classic influence throughout.

Following the Revolution, our architecture took on a more monumental character. Brick and stone came into more general use, but due to the influence of the classic, a pseudo Greek style became prominent. The Gothic revival in England had some influence upon our building. To this movement we credit the fine old Trinity Church in New York City, built in 1843 by R. Upjohn, and Grace Church, New York City, built in 1858 by Renwick. From 1850 to 1876 the Civil War and subsequent expansion brought on a period of political agitation and of commercial prosperity but of stagnation and ugliness in art. Large and costly buildings of inferior and unintelligent design attest a period of darkness and materialism in American architecture.

The great fires in Chicago (1871) and Boston (1872) and the panic of 1873 seemed to give some check to the abnormal commercial activity. The Centennial Exposition in Philadelphia, in 1876, brought the American people into contact with products of Old World art. More extensive foreign travel followed and an interest in finer things developed. Little was done in this country, however, in architectural education. Architects who desired training usually went to France. Classic influences dominated modern French architecture. H. H. Richardson, a man of remarkable talents and dominating personality, developed a style which, in his own hands, was significant. Trinity Church, Boston, the Pittsburgh, Pa. County Buildings, and a number of libraries are fine examples of his work. But following his death in 1886, there arose many imitators who lacked his spirit and endowments. They oversupplied the country with squatty pillars and overbearing arches and gave us a weary monotony of ugly, heavy, and utterly unstimulating architecture.

Then came a period of tremendous industrial development, requiring the architectural profession to use practically all its resources in meeting the demands for new commercial and industrial buildings, and French chateaus and castles for the new million-

aires. For a time the pre-occupation of architects with civic and commercial work, the ignoring of the church by the colleges of architecture, lack of interest in worship by many churches, the mail-order architect and general lack of cultural appreciation threatened to bring our church architecture into a deplorable state.

During a few years just before World War I, several American architects who were devoted to the Church, created significant church designs even though they were criticized for lack of originality. The names of B. G. Goodhue, R. A. Cram, Frohman, Robb, Chas. Collens, W. H. Thomas, their associates and others will be honored in American history for the establishment of reverent dignity and beauty in American church architecture.

Then came the Great Depression to condemn the inefficiency of the alleged efficiency of the Americans. Then another World War to condemn still further our folly and stupidity, and where do we go from here?

THE SPANISH MISSION

We must recognize too the contribution of the Spanish in our Southwest. Unfortunately, this style has been parodied in cumbersome fire houses, town halls, the gasoline stations, but as an expression in Christian architecture it is interesting, colorful, redolent of devotion, and fitting to its environment. It gives to the United States a touch of romance and color from a beauty-loving race from the south of Europe. The Spanish priests came with the Spanish soldier and while the influence of the soldier has disappeared from our continent, the influence of the Church, particularly as expressed in its architecture, retains its potency. We will not undertake to name the many monuments still extant. In Juarez, Mexico, there is an interesting example. The ceiling is composed of carved logs said to have been carried on the shoulders of Indians for a distance of two hundred miles.

From the mud, they made abode bricks; from the clay, the beautiful roof tiles. Thus from the ground a beautiful and suitable architecture was created by the Spanish missionaries.

Church building in America has labored under tremendous handicaps. The great distance from good examples of Christian architecture, the lack of trained craftsmen, the conditions of frontier life, lack of church unity, an apathy toward good usage and the appointments for public worship, strong emphasis upon meetings and controversial preaching rather than worship, made the orderly development of a constant and inspiring church architecture most difficult.

V THE TASK THAT CONFRONTS US

Now after World War II, even in the midst of turmoil and uncertainty, we find in all areas of life a tremendous volume of buildings of all types being planned. Many architectural firms have the task of planning commercial, industrial, civic and institutional buildings whose value will total in some instances more than forty millions of dollars. American Protestant churches are now engaged in a church building planning enterprise of unprecedented proportions.

For many years Protestantism has been paying a heavy price in inefficiency and ineffectiveness because of having neglected its church buildings. Churches were concerned to build colleges and other institutions but the church building itself remained neglected. The program of the church in worship, education, and service activities, has gone far in advance of the equipment required to house and facilitate it.

In order adequately to accomplish the great task to which hundreds of Protestant churches have set themselves, two types of leadership are required. First, a leadership extending down to the local church that will enable the church so to plan its building PROGRAM that the architect can design the rooms and arrangements required to enable the church to carry forward the required program of activities. So often, churches plunge into building enterprises and employ architects to prepare drawings before they have carefully formulated their policy and program or have estimated their requirements based on community studies and program building.

To make such needed guidance possible, the Interdenominational Bureau of Architecture was established in 1934 by executives representing 25 Protestant denominations. Its work is to give counsel and guidance to local churches and to promote better church architecture through institutes, conferences and literature. Frequently it is in a consulting relationship with enterprises whose total value runs into many millions of dollars. The Church Building Committee composed of denominational executives, meets twice yearly to discuss church building problems and exchange ideas regarding counsel to local churches, particularly on matters of church building finance and through its Interdenominational Bureau of Architecture, the guidance needed in advance of building programs.

PROMOTION AND EDUCATION

Church papers have given notable leadership in church architecture during the past few years. An excellent paper edited by Dr. John Scotford of the Congregational Church, "Advance" and the Christian Herald, an interdenominational religious magazine reaching nearly 400,000 subscribers have rendered notable service in promoting better church building. Church Management and the Pulpit Digest have also rendered good service in this field. Liturgical Arts, a Roman Catholic journal, gives notable leadership in ecclesiastical art.

The second type of leadership needed is architectural leadership. We have had in the United States many excellent church architects, but depression and war years, making it impossible to erect new church buildings, have caused architects to turn to other lines of endeavor, or rather, not to turn toward church work. The American Guild of Church Architecture, a rather loose organization of busy architects who are interested in church work and who meet once or twice a year to exchange ideas and hear reports regarding methods of construction and various phases of church building, and equipment, is a valuable factor in the notable movement for an effective church architecture.

The Church Building Committee is offering during the college year, prizes for which senior students in architectural colleges may compete. This project is an effort to increase the interest of architectural faculties and students in church architecture. As yet the theological colleges give very little attention to the House of God.

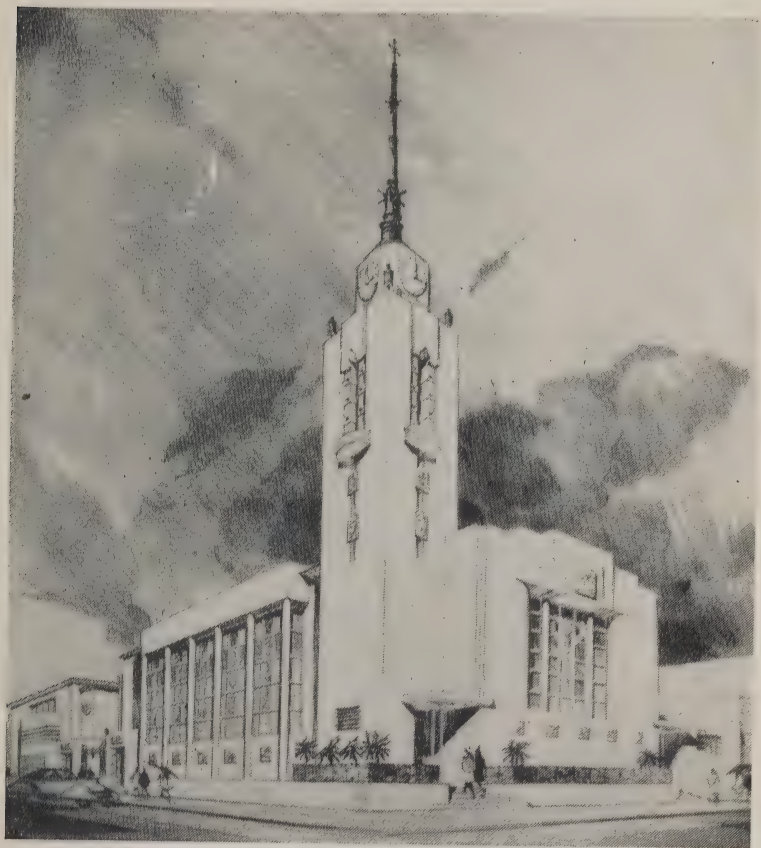
Architectural magazines seem interested mainly in publishing strange and bizarre examples of church architecture and have done little constructively to assist the architect who is asked to do church work.

THE CHURCH MUST LEAD

In order to have a successful church architecture, the Church itself must accept a definite responsibility. The Church must have its own convictions regarding exterior design. It must be willing to accept and to promote effective arrangements for worship and Christian education. The Church must realize the need for a broad program of ministries and the churchly direction of social and recreational work, as a part of the Christian movement. The Church must help develop a leadership that will give us architects who are deeply concerned about religion; and, religious leaders who are capable of forming the bridge between the requirements of the Church and the architect's office, and who will give counsel to local churches so that they will be able to formulate the program in such a manner that it will make it possible for the architect to render effective church service.

The church must become intelligent regarding art. No longer should churchmen accept ugliness as a part of religious expression. The Church must understand how to demand and encourage truth and beauty in religious art. It must give guidance that will protect church people against the encroachment of fads and well meaning but deficient promoters.

To a great degree Protestant churches have been bound by a sort of superstitious belief in the power of words, spoken or printed and have failed to realize the power of Beauty to minister to the human soul.



DESIGNED BY A. H. FINK

Design for a Church in Florida (First Street Methodist,
St. Petersburg) where sunshine is the city symbol.

Educational building at rear completed.

VI ORGANIZING THE LOCAL CHURCH FOR THE BUILDING PROGRAM

BEFORE THE ARCHITECT COMES

The first step in a building enterprise is NOT to appoint a "building committee."

It is never necessary to have so religious an undertaking as building the House of God, accompanied or followed by any undesired features or results.

Careful planning of the organization and of procedures well in advance will help to assure that the building project will become a spiritual as well as a material advance.

The very first step in a successful building program is to secure the best available church building consultation service. Perhaps such service will have to be secured through correspondence. The churches have been slow to supply "evangelists of the House of God."

Before the architect is engaged, plans secured, or definite decisions made regarding even the smallest building improvement, it is important to have at least the following indicated work done:

1. A study of the activities and methods found successful in Worship, Christian Education, Fellowship and Service activities.
2. A study of the population by various age groups, population trends and the community; defining the responsibility field.
3. A study of other churches and institutions in the community to help determine the needed program.
4. Prepare a statement of the needs in terms of activities and groups and the needed rooms and areas for each.
5. A study of location and sites.
6. Study possible remodeling or enlarging.
7. Describe and evaluate experiences of other church building projects.
8. Promotion and preaching to secure united devoted support of the needed program.
9. Promote stewardship and estimate the probable financial resources.
10. Display with lantern slides, blue prints, photographs, exhibits, various types of buildings, rooms and equipment.
11. Organize the best kind of building council for the study, promotion, financing and construction of the improvement.
12. Write a building program so that an architect will know all of the requirements to be provided.
13. Describe how to utilize space and rooms to best advantage, how to save costs by limiting ceiling heights, duplicating use of rooms, etc., how to build by units. Make a list of possible economies.

14. Write a check list so nothing desired will be omitted and so that changes will not be required after the building is started.
15. Select an architect and a builder.
16. Write an equipment program.
17. Plan to make the financial program a means of spiritual growth.

A glance at this list of items convinces one of the wisdom of securing experienced and competent counsel before doing anything at all about the building enterprise.

A CHURCH BUILDING ENTERPRISE CAN IN EVERY WAY BE SUCCESSFUL ONLY if there is a well directed organization for the work of study and program building in advance of securing an architect or having building plans considered. Each project requires specially prepared plans of organization and procedure.

The "field of responsibility" should be studied and a statement of needs prepared, without regard to possible plans of the building or preconceived notions of church building plan or exterior design. The full task of the church should be considered regardless of what amounts may finally be expended.

The kind of organization here suggested makes it possible to enlist the services and talents of a large group. It avoids "hurting the feelings" of interested members of the congregation who might not be placed on a so-called "building committee." The larger the group of workers engaged in the advance movement, the greater the enthusiasm and understanding of the problems involved. The financial support for the enterprise will be strengthened as the congregation realizes what is needed. No member of the church should be denied some part in the highly important and very religious task of planning and building the House of God.

An inspirational meeting may be held, to be attended by all invited to enlist for committee work. A written statement of the duties and responsibilities of each committee and of the entire organization should be presented to all. All items that will need attention may be noted, then assigned to the several committees.

These suggestions are in extremely brief form. Each church should assemble a suitable plan of organization and list in detail the duties of all committees, and a time schedule for their work.

PROPOSED PLAN OF ORGANIZATION

A—The Church Building Council, or the Forward Movement Council, including the members of all committees.

B—The Executive Committee, seven or more members acting for the church as the church may direct. May be composed of the chairmen of the working committees and chairman of the council. The pastor to be ex-officio member of all committees. The chairmen of all committees may have an advisory relation to the Executive Committee and should regularly report to it.

C—The Working Committees. (Sub committees will be needed in the work of these committees.)

1. The Survey Committee. Conduct a religious and community survey. Make a thorough study of religious affiliations of the population of the "responsibility field." Locate on a map present membership and possible future constituents. Study public school locations and where possible, religious affiliations of pupils. Confer with utility companies and others regarding possible population trends. Consider industrial and other situations that may affect population movements. Study site and location.

2. Committee on Worship and the Religious Arts. Study trends and effective programs in Worship and training in Worship. Recommend facilities and arrangements for sanctuary, choir and auxiliary rooms. The chapel. Childrens' chapel. The organ. Study and recommend glass, decoration, color schemes, selection of pictures, woodwork, etc., for entire building. Study exterior design. Confer with Committee on Christian Education.

3. Committee on Christian Education. See publications of the International Council of Religious Education, 203 N. Wabash Avenue, Chicago 1, Illinois, and denominational agencies. Subdivide for studies of Christian Education for Children, for Youth, for Young Adults, Adult Christian Education, Week-day and Vacation Church Schools. Confer with Committee on Worship and the Religious Arts and with Committee on Fellowship and Recreation. Estimate, on basis of surveys, future possible church school constituency. Present list of rooms and equipment required, characteristics of rooms, floor areas, ceiling heights, built-in facilities, etc.

4. Committee on Fellowship and Recreation. Study plans for social and recreational life of the church to be integrated in the work of Christian Education and Evangelism and the spiritual strengthening of the church. Consider moving pictures, games, summer and outdoor activities, dramatics and pageantry. Dining hall, kitchen, parlor and kitchenette facilities. Confer with denominational and interdenominational workers. List rooms, equipment needed, floor areas, etc.

5. **Plans and Construction Committee.** Investigate and recommend architectural service. Investigate and recommend contractors. Study, in conference with architects, materials, mechanical equipment, etc. suitable for church work. As directed by the Executive Committee, the congregation or the official church body, secure and exhibit tentative plans and estimates of cost, have them revised, and secure construction drawings and specifications. Secure erection of the building or any parts thereof. Check closely with Finance and Promotion Committee, in addition to being guided by Executive Committee. ONE PERSON to transmit all instructions to the architect and through the architect to the builders. Have sub-committee on landscaping.

6. **Committee on Finance and Promotion.** It may be well to appoint two committees for the work herein described. A FINANCE COMMITTEE and a PROMOTIONAL AND PUBLICITY COMMITTEE. After careful study and planning, direct campaigns of promotion and fund-raising, as authorized by the Executive Committee. Enlist and train workers. See book "Church Building Finance" 75 cents. Prepare publicity material. Arrange for newspaper publicity. Give special attention to religious values in connection with the promotional program. Seek to cultivate a religious interest on the part of the entire church, church school and community. Help plan participation in the building program such as having young people gather rocks for a fireplace, help plan symbolism to be used, etc.

7. **Committee on Women's Work.** Confer with Committees on Fellowship and Recreation and Christian Education. Recommend program of building and equipment for dining hall and kitchen facilities, parlors, work rooms, etc. Plan for good church housekeeping.

8. **Committee on Furnishings and Equipment.** Cooperate with the Committees on Worship, Christian Education, and Fellowship and Recreation. Investigate sources of supply, prices, samples, etc., of all furnishings and equipment. Cooperate closely with the architects. Perform work as assigned by Executive Committee.

9. **Committee on Administration and Special Facilities.** This Committee will recommend adequate church offices, pastors' conference rooms, rooms for staff workers, and seek to guard against any desirable items being overlooked. Study and recommend mechanical equipment, heating, lighting, air conditioning.

VII PERSONAL TO THE PASTOR

It has been the writer's privilege for more than 20 years to be associated with splendid pastors in all areas of Protestantism and in every state of the United States during their leadership of church building improvement and new building programs. Increasingly pastors have become concerned about the religious effectiveness of their church buildings. Formerly some pastors became rather impatient when they had to give attention to matters of property or building improvement or new equipment. Many pastors were eager to leave such problems to their officials. Today, however, we find pastors who are eager to give the needed religious leadership in church building and improvement programs as vital parts of their ministry. Successful pastors no longer separate the secular in church work from the spiritual. They know that a picture or a dozen children's chairs may be selected for the glory of God and in such a way as to make religious work more effective. The pastor finds many opportunities for resultful preaching in connection with a church building enterprise. In such a program, he has a potent means for uniting his congregation and leading them forward to a worthy goal. Minor difficulties, small jealousies and problems within the church organization fade out of existence during the promotion of such a noble enterprise as a church building program. The pastor need make no apology for assuming the position of pastoral leadership in such an enterprise.

The splendid laymen, I have met them in thousands, give most devoted service to the church. Nevertheless, they have their own life's work on their minds. Throughout the long days they may be besieged with all sorts of problems. They come to a church building meeting usually in the evening, tired after the day's work and trials. They sincerely love their church and depend upon the pastor to furnish the guidance and leadership necessary for any successful enterprise.

An exception to this may be found in one case in a thousand. Usually when a program drags we find it is because the pastor has not accepted a place of real leadership of the program. This does not mean that the pastor must draw plans or solicit funds. Let him understand the responsibility of pastoral leadership and not for an instant shirk it. He must see that the best possible organization is established; that committee meetings are publicized and held; that an agenda is prepared for each of these meetings; that the work that should be accomplished is cared for before adjournment. He must deeply be concerned about the selection of an architect and doubtless should have personal interviews with the architects to be considered because the pastor and the architect must enter into a very definite cooperative relationship.

The pastor is the one who is supposed to understand the inner workings of the church, its functions that are of imponderable nature, and he must transmit his religious enthusiasm and devotion to the heart and mind of the architect.

The pastor must see too, that the financial program is maintained on a definitely spiritual level far in advance of the beginning of the actual financial canvass; it is the responsibility of the pastor to lead his people to an acceptance of the principles of Christian stewardship and sacrifice. He is responsible for leading the congregation to the spiritual plane from which they can unitedly advance to accomplish so worthy an undertaking as planning and building the House of God.

Through the church building program, the pastor has a means of increasing his own spiritual and mental stature and of increasing his position of leadership in the congregation and in the community. Pastors who successfully lead church building programs become stronger and bigger men, more useful ministers and more effective leaders in the church and community generally.

In olden times bishops and exceptional officers among the ministry devoted their lives to leadership in building the church or cathedral. The Church stands in constant need of such leadership—by pastors who see the holiness and the spiritual value of leading in church building or improvement enterprises, not as amateur architects or carpenters, but as pastors who embark upon a noble crusade and who lead their congregations with them. Too, the Church needs pastors, who having successfully led their own congregations in a church building enterprise, will make visitations to neighboring churches and relate their experiences in leading church building projects.



WENNR & FINK ARCHITECTS

Remodeled Chancel, Methodist Church, McConnellsville, Ohio

VIII CONFIDENTIAL TO THE ARCHITECT

The writer has during the past 25 years enjoyed the enriching experience of fellowship with many American architects who hold the highest ideals of their profession and who have a deep interest in religion and in the work of active churches. Many times they become well nigh discouraged about church work. Churches expect them to be mind readers, to know all about the needs of any local church without being told—whether they expect to place boys and girls in the same class groupings, whether there shall be social and recreation programs or devotional chapels in the building program; how many to provide for in the different rooms. Churches will put an architect in the middle of a small mass meeting of men and women and from all directions in a disorderly manner will give him instructions and ask questions and engage in side arguments about various features of the building. A member of another profession, noted for his big fees, will brazenly ask why the architect needs a fee as large as a real estate salesman. Before the church decides on the floor plan some trustee will persist in discussing the pitch of the roof or the type of heating. Brother architect goes home with a headache but keeps cheerful through the next day when a committee of sisters come upon him unannounced to talk about the kitchen, not waiting to give their instructions in writing through the planning committee. However, church design has its many rewards. Increasingly the entire community is coming to recognize the importance of the all too modest architect. Publications are even beginning to name the architect who created the design in the very glowing descriptions of new church buildings, along with that of the bishop who merely dedicates the completed edifice and the visiting parson who prays.

To architects who are concerned about our American church building enterprise, we venture to offer some suggestions.

Don't be lured into giving free advice or getting put on the spot at some badly organized church board meeting before they have signed a contract with you.

Don't become involved in a free for all church board meeting. Don't draw a line until the church has given the complete statement of needs, put in writing and approved by those authorized to do so. Find out who are instructed to speak for the church. The parson may not have been authorized to tell you that his dreams represent the program of the church.

Don't present free sketches and employ salesmen's methods to land a job.

Stand firmly upon the splendid ethical principals of the architectural profession.

Don't offer cut-rate fees. Increasingly church committees and leaders are recognizing the value of competent professional service. The architectural profession itself, however, must do more to inform the public of the work of an architect and its necessity.

If you have been appointed architect and the signed contract has not come through or the plot survey plan, call up the pastor. Perhaps a committee chairman has gone to a convention, or something. One church building program was delayed for months because the committee did not secure from the city a statement of building restrictions, although they had owned the property for more than 10 years and had two honorable judges upon the church board. With such prominent men on his board, the pastor was reluctant to check upon them.

Try to keep the minds of church people upon the needs of the church program, activities to be provided for, kinds of rooms needed, so you will have time to develop plans and designs before they try to tell you how to do your own work.

Take samples of working and engineering drawings, large size detail drawings, to help a church understand what is involved in the work of an architect. You might take along a few volumes of Sweet's catalog if you employ a porter, to indicate all the materials, equipment, items, etc., you must study in order to recommend the best for their particular problem. Tell them how much it costs to employ good draftsmen, college graduates, and to pay the office rent. Show them the difference between a tracing and a blueprint. You might tell them "how you make blueprints." Many think it takes a good architect "to make a blueprint."

Take courage; the founder of Christianity paid for it with his life, and we simply must carry on for the sake of world sanity and safety, to say nothing of making the world Christian.

Throughout ages the noblest buildings men erected were for religious purposes—again it shall be so!



Quiet dignity and simplicity are expressed in the design for a Methodist church at Clewiston, Florida.

BARBER & MCMURRY, ARCH

IX THE FINANCIAL AND PROMOTIONAL PROGRAM

The task of leading in the financial and promotional program may very briefly be summarized thus:

1. The development of a deep conviction of the need and a concern for the responsibility on the part of each member of the congregation to help meet the need.

The pastor may need to lead his people to an acceptance of the principles of Christian Stewardship many months in advance of the actual building program. This is a matter of the very highest importance.

2. Decision as to the leadership to be charged with responsibility for organizing and conducting the financial program.

3. Arrangement of the time schedule.

4. Enlisting and training the financial organization, including committees on special gifts, memorials, etc.

5. Planning and preparation of the promotional and publicity materials.

6. Preparation of mailing lists. Analysis and classification of prospects lists.

7. Conducting the intensive campaign.

8. Following up the campaign and planning an efficient collection program and the continued cultivation of new prospects.

The pastor will undertake his responsibility for leading the people to the high spiritual plane required for such a noble undertaking as Building the House of God far in advance of the actual work of planning. He will infuse himself with a thorough acceptance of the principles of Christian stewardship and then lead in instructing the people and leading them to an understanding and acceptance of Christian stewardship as a way of life. This **may** require a well planned and earnestly conducted school of stewardship and stewardship teaching throughout all grades of the church school. Such leadership will require great spiritual strength, patience and the other spiritual qualities. It is his task to lead the people to the place where they are eager to sacrifice and to carry forward the Lord's work.

Next, will be the discussion and decision regarding the leadership of the financial organization. The matter of employing outside professional leadership should very carefully be considered. At this point denominational headquarters leadership can give invaluable counsel. Clearly there is a field for wise and consecrated professional financial leaders. Before agreeing to employ such leadership one will need to know the person who actually is available for your work.

Leadership in church finance is not a matter of mechanical efficiency but of personal service growing out of deep religious conviction and an eager desire to further the work of the Church.

The employment of a competent professional financial leadership may mean additional thousands of dollars for the project if the right person is secured and his leadership is heartily followed.

Don't Delay the Financial Program.

Do not wait until the details of the building program have been decided upon before organizing the financial program. Formerly we thought it necessary to have outline plans prepared in order to show the people what is intended by way of a building program. It has been found, however, that money can successfully be raised upon a conviction of the needs and an understanding that money will be required to meet these needs. Most churches can use all of the church building and equipment that they can pay for. It will be well therefore, carefully to estimate the potential financial ability of the congregation when the people have reached a high plane of spiritual consecration and a feeling of definite responsibility for equipping their church to do its work in the most effective manner possible.

Many churches set up a church building fund campaign for a period of just twelve months. A certain amount is announced as the goal for the year's campaign. This is a well organized and thorough-going campaign reaching every individual in the church membership and congregation with an appeal to pledge a certain amount to be paid each week or month. Then at the end of the 12 months' program, it is expected that the tentative plans for the building will have progressed far enough to indicate the kind of building and equipment that should be provided and so an estimate of the total cost can be secured. Then a second year's campaign can be established or perhaps the second cycle of the financial program will be for a 25 months' period, pledges being taken to be paid weekly or monthly. There is general agreement that pledges should not be for a term longer than 36 months at most.

For a church building or improvement program, we do not suggest the establishment of a committee but a financial **organization**. This will be much more than a finance committee. It will include a large number of people who are willing to join this very important organization. They are to realize that they are selected because they have personal qualities of leadership and devotion. They will be willing to attend an instruction and coaching class, possibly a school of stewardship, one night a week for several weeks. They will be taught in matters of psychology and personal approach to other church members and those who can be led to become interested in the enterprise. They will talk about the project among themselves and thus develop an interest in presenting the matter. Their own interest and enthusiasm will grow and then they will become competent to "sell" the building program to others. Visitations will be made just for conversation about the program before visits are made to solicit pledges.

Memorial Gifts

A small special committee may be appointed to manage the memorial gift program.

All objects to be offered as memorials must be designed by the architect to the approval of the plans and construction committee.

This includes the windows, furnishings, and all visible equipment. Then a list of these memorials is announced with suggested amounts that will be accepted. Accept memorial gifts only after all have made a reasonable pledge to the general building fund.

Record the memorials in a specially made durable book.

The promotional program will, of course, be conducted effectively with the financial program, or the financial and promotional program will be one and the same. This will include sermons and talks by church school teachers, five minute talks by laymen as well as most carefully planned and prepared printed material and newspaper publicity which, of course, should be paid for.

We quote the following from the book "Church Building Finance," by Conover, 1946, Bureau of Architecture; price 75c; 64 pages divided under 14 chapter headings.

The Worthy Order of Canvassers

Make much of the canvassers' organization. Cultivate an atmosphere of importance with regard to the canvassers. Have it understood that to become a member of the canvassers' staff is a recognition of special ability, an evidence of confidence in the persons selected. Give the canvassers' organization a distinctive name, but avoid anything that may seem frivolous or amateurish. Military terminology in connection with Christian work is questionable.

The canvassers will receive experience and training that will enrich them personally. They will be selected because of their willingness to be trained, their sincere interest in the Church, and because they ably represent the Church.

Have it known that the canvassers' organization will be an opportunity for the finest kind of human fellowship which one may have. The inspirational dinner meetings, the opportunities for closer friendship with the finest people in the community, the increased knowledge of the work and problems of the church that will be gained, the opportunity to have one's personality grow and to count more effectively, all make membership in the Order of Canvassers something eminently desirable. Have the people realize it is an honor to be selected for this essential work.

Training and Directing the Canvassers

Having selected and enlisted the canvassers, a program of inspiration, training and direction will be started. This program which is to mean so much to the participants personally and to the church may be inaugurated by an inspirational dinner addressed by one who can produce a spirit of enthusiastic desire for service.

The canvassers should understand that it is essential for them to attend all the worship services and a church school class, possibly a class in Christian Stewardship during the Sunday School session. They should visit other Sunday School classes, youth meetings and other activities in order that they can intelligently and enthusiastically represent the full program of the Church. Theirs is a promotional and a "selling" job. They must know the inestimable value of what they are to sell.

The canvassers should meet each week for eight weeks at the very least for instruction and conferences. The following notes will indicate something of the scope of their training.

Notes for Canvassers

1. Be convinced of the absolute necessity of the Church and all its work. Make your own notes regarding this from your reading and from sermons and addresses.
2. Become convinced regarding the principles of Christian Stewardship.
3. Think through your whole experience of the Church and of the Christian religion and see if you cannot recall one event or one circumstance to make you everlastingly grateful to Almighty God and His Son our Lord Jesus Christ, so that you are eager to do some deed expressive of your gratitude and sense of loyalty. If it is not too intimate you may have occasion to refer to such an experience in the course of your canvassing.
4. From the moment you accept enlistment as a canvasser plan to keep the days set for the canvassing free of other engagements. Plan to make your service a clean-cut job finished on time. As a minimum read every piece of literature that will be distributed to the members of the congregation prior to the canvass period.
5. Talk things over with the other canvassers whenever you are thrown with them. This will strengthen your own convictions about the program.

X THE TIME SCHEDULE FOR A BUILDING PROGRAM

Few people realize until after they have had experience in a church building or improvement enterprise what an extensive amount of time is required for planning for the project before any actual construction can be started. It is of the highest importance to understand this. Quite often the congregation becomes disappointed and loses interest in the project because the building is not actually erected within a few months after the program has been inaugurated. A time schedule for the program is needed by the pastor and all others concerned with the leadership and committee work. This will help to record the progress and keep the work moving. It will help also to explain to the congregation why it is necessary to occupy months and years in work essential to the enterprise in advance of laying the foundation of the building.

We offer below just a very bare outline as a suggestion for assembling a time schedule. This may be studied and then a complete schedule assembled as may seem best for any enterprise. The schedule briefly outlined below covers a period of four years and six months from the time the program is started until the new building or certain units of it are finally occupied.

FIRST YEAR

The first six months. Convince the congregation of the kind of church program needed — why we need a recreational program or a nursery department, or a weekday church school. Intensive personal cultivation of a deep concern for an effective church program. Each local church organization to study and plan its needed activities.

Seventh and eighth month. A survey of the population and population trends. A religious census, carefully and thoroughly taken and tabulated. The matter of church location studied. Preaching program on the responsibility of the church and on stewardship.

Ninth to twelfth months. Assemble the forward movement organization. Select and assign members to committees and instruct each committee and sub-committee. See Chapter VI.

SECOND YEAR

First month. Present to the congregation a complete statement of all the needs, the rooms, their purposes, sizes and characteristics, and equipment for the church program required.

Second month. Conferences on finance and instruction of the finance organization. School of Stewardship. See "Church Building Finance". Conover (Bureau of Architecture, 75c)

Third month. Intensive promotion in preparation for the financial campaign.

Fourth month. A financial campaign completely conducted. Collection program organized.

Fifth and sixth months. The architect begins tentative outline plans. Continue to encourage the people and to rejoice because of the achievement in the financial campaign and the decision to start the planning.

Seventh month. The architect displays the first tentative plans for review and for further instruction.

Ninth month. The second set of outline floor plans discussed and final instructions to the architect.

Eleventh month. Exhibit of the final outline floor plans and the first studies of the architect's exterior designs displayed.

THIRD YEAR

First month. Careful follow-up of the collections and continual extension of the financial campaign to new members and friends.

Second and third months. Consideration of costs and preparation to approve the architect's outline plans and exterior design.

Fourth month. Authorize the architect to complete the working drawings, engineering drawings and specifications as required for constructing the building.

Seventh month. Approve the final working drawings and specifications and invite the contractors who have been selected to bid, to render their proposals.

Eighth month. Study and revise contractors' bids; check on sub-contractors and their bids.

Ninth month. Sign contract for the construction of that part of the total plan that can safely be financed.

FOURTH YEAR

Sixth month. Where the people work rapidly, and the climate permits, dedicate the building or unit that has been erected.

There will be continuous and constructive activity in certain departments of the work throughout all the above indicated time. This includes: the publicity and promotional program which reaches down to every church school pupil and reaches everyone in the community; continual listing of new members because of the values to be made possible by the new church building; training of workers for the activities that will be possible in the new building; celebration of the accomplishment; recognition banquet for the professional, mechanical and laboring people who erected the building.

This suggested schedule may not meet the needs of any other church. It may help to indicate the many items included in a church building program, and that a place will be required in the schedule for each part. If any part of the program, required for a successful outcome is overlooked or is put in at the wrong time, the whole enterprise will be hampered.

XI. ARCHITECTURAL SERVICE FOR THE CHURCH.

The leader of a church building project or of the smallest remodeling program should exert his influence to secure the very best available architectural service. At this point he can serve his church well. Failure to secure architectural service **competent for Church work** means failure of the enterprise to a degree that may be ruinous to the work of the church.

It is important to know just what the work of the architect includes. The following, in brief form, is a common description of the architect's task. The very smallest project should receive this full service, rendered by a legally licensed architect.

A DEFINITION OF ARCHITECTURAL SERVICE

Division I. Preliminary Drawings and Sketches.

Several plans and exterior designs showing various solutions of the problem; these to be revised or modified until a satisfactory plan and exterior design have been approved and estimates of the cost secured. Specially prepared publicity drawings may be provided for the financial campaign. Then a final set of complete preliminary plans drawn to a scale of $\frac{1}{8}$ " to the foot.

At this stage 20 to 25 per cent of the architect's fee is due.

Division II. Construction or Working Drawings.

Not ordered until the work in Division I has been satisfactorily completed and the preliminary drawings reviewed by consultants, and estimates of cost agreed upon.

For a church building this section often requires twenty-five to forty sheets of drawings from which blue prints must be made.

Division III. Specifications, Contract Documents.

Specifications need to be thorough and complete, leaving nothing to the imagination of the contractor nor to be added later as "extras." Preparation of specifications involves the examination and thorough knowledge of hundreds of building materials and knowledge of the best methods of construction.

At this stage a total of 60 to 70 per cent of the architect's fee should be paid.

Division IV. Detailed Drawings

Certain parts of the building, woodwork, stonework, windows, stairways, wall sections, and assembled parts must be described fully by large-scale detailed drawings. Unless expert service is rendered in this division the building will be commonplace. Others will have to be paid to provide necessary details. An additional amount may be paid for special full-size plans of symbols, carved work, etc.

Division V. Architectural Supervision.

Regular inspection of construction, materials, etc., letting contracts, auditing accounts, approving monthly payments due contractors and others. Very essential for a successful outcome.

Usually the architect's fee is divided into five payments corresponding to the above divisions. This will vary however according to the practice in different offices or sections of the country.

The Place of the Consulting Architect in Church Work

So varied and complex has building construction become that there are specialists in architectural practice as in the other professions. An architect who is engaged in a successful practice of designing homes may be unable to secure the time necessary, even if he has the religious background and disposition, to understand the requirements of the church program and the necessary elements of church design and planning.

Church building is the most complex and difficult of all architectural problems. Within one structure there must be a sanctuary for divine worship, rooms for training in worship, a school building, and a social and recreational building. These are, from a construction standpoint, quite different buildings, but in successful church work, it is necessary to have these different types of buildings planned as one structure with a harmonious design for the whole. This is a staggering problem for any architect.

The consulting architect has a very important place in the church field, especially where it seems necessary to employ an architect who, besides doing successful church work, has also had to spend a part of his time in other kinds of building. The consulting architect usually performs all the service outlined in Division I of the Definition of Architectural Service. Or, he may do all the work except that in Division V. The consulting architect should personally visit the field, should meet with the building council and its advisers. He will then prepare preliminary sketches which, after being revised and developed and having been properly approved, will be the basis on which the associated architect will work. There may be a lapse of time between the work of the consulting architect and that of the associated architect during the promotional and financial program. When the financial resources warrant it, the associated architect proceeds with the work of preparing working drawings and specifications, securing bids and, as instructed by the committee, letting contracts, with conferences as required with the consulting architect.

SELECTING THE ARCHITECT

Architecture is one of the learned professions. The competent architect must have technical skill and knowledge, business and executive ability, and artistic feeling with a background of general scholarship. He has taken courses in liberal arts, literature and history as well as technical training in business administration, design, architecture, engineering and purchasing. In addition to all this, the designer of the House of God must have a deep religious feeling.

Most states require the examination and registration of architects, making it illegal to use the term "architect" without such legal registration. Avoid plans supplied by lumber mills or contractors, as you would doubtful patent medicines for a serious illness. If plans are not signed with the words "Registered Architect," ask if the one who drew them is really an architect. "Designer" on a plan usually means the author is not an architect.

Do not expect the best architects to come soliciting your work. The very architect you need may never solicit. He may take the same attitude that the doctor or lawyer does toward soliciting work. Do not employ the architect on the basis of pleasing pictures he may present. Anyone may hire a good artist to draw sketches that will please the committee.

Employ the architect just as you would other expert professional service—upon his ability and record of accomplishment and his sincere interest in the work of the church.

The worst possible way to select an architect is to invite several to present sketches. Then the best salesman with the prettiest pictures and rashest claims as to the cost of his buildings may win the commission. It is as unreasonable to ask an architect to prepare free sketches as it is to ask a lawyer or doctor to present a free opinion, which you will use or not as you choose, and expect satisfactory results. (There is, however, an approved competitive method in which architects are invited to submit tentative plans for which they will be paid, the best solution being determined by a jury.)

Expect to pay the architect a fair fee. His fee must cover a wide range and variety of expenses. Besides compensating the architect for his expert knowledge and services of a varied nature, out of his fee he must pay his draftsmen and engineers, the majority of whom are college and university trained, office force, rent, supplies, blue-printing plans after they are drawn; typing or printing specifications, etc.

The minimum fee a church should expect to spend for complete architectural service is 7 to 8 per cent of the cost of the building and any furnishings and equipment selected with the architect's advice. For remodeling, more should be paid. A comparison of this fee with the cost of other expert and professional services, in consideration of what the charge really covers besides the time of the architect himself, will show it to be very reasonable. The fee for church work should be more than the standard rate paid for commercial work which costs the architect less to execute.

It costs an architect much more to serve a church than a commercial enterprise. More time is consumed with committee meetings and consultation with the pastor or other members of the church who feel interested. In a business building several floor plans may be duplicated, but in a church nearly every room requires individual study.

The American Institute of Architects which is the professional organization of architects in the United States prints an approved form of contract for owner and architect.

The contract should indicate whether the fee covers the cost of engineering work and drawings, for heating, air conditioning, lighting, etc. The cost of travel may be in addition to the fee.

Never consider the architect's fee as something additional to the regular cost of building. It is an **essential part** of the cost of building.

Omission of any part of the architect's work will result in expensive loss of time in construction, the cost of "extras" and waste. The architect's knowledge of materials and their cost all over the country may alone result in savings of more than the amount of his fee.

The A. I. A. maintains a rigid code of ethical practice which is designed too, to protect the owner from costly and unpleasant experiences with the incompetent persons who attempt to do the work of an architect. There are perhaps good architects who may not want to belong to their professional organization. But ask the architect you are considering not only about his legal license to practice in your state, but whether he is a member of the A. I. A.

The architect must not be financially interested in the manufacture of any building material or equipment.

He must not be in the employ of a builder. He is engaged solely in the interest of the owner.

Churches have foolishly dealt directly with manufacturers or contractors thinking thereby to "save the architect's fee." Not only is the architect's fee included in the cost, in these instances but the architect or alleged architect works in the interest of the manufacturer and the work is removed from competition with other producers.

The architect must be given sufficient time and be left uninterrupted to develop and revise his plans —thereby saving money for the church and securing a better result.

Every church building problem must be studied individually—no two problems are alike.

Authorize ONE PERSON to inform the architect in writing, of all decisions. Allow an architect to begin work only after an approved form of contract has been executed.

ARCHITECTURAL SERVICE FOR SMALL CHURCHES

Admittedly it is a difficult problem to supply complete architectural service for small and isolated churches. But the lack of such service has resulted in more money being spent by denominational boards to deal with bad church debt problems than it would have cost to provide such adequate consultation and architectural service as would have prevented the unhappy debt-cursed conditions.

Efforts have been made to supply stock plans to small churches, without providing architectural supervision. This has been as bad for the small churches as for the large ones. A church board in one state employed an architect at cut rate fees to prepare plans for certain projects. Then the board sold blue print copies of these plans to more distant churches in a commendable effort to "get them some kind of architectural service." One of these plants prepared for a level site was sent to a church that was to build on a hill top. The hill top church should have been built right at the ground level. But it was built according to the plan and to enter the sacred edifice one climbs not only the hill but four feet of steps in addition. The cost of the four feet of wall clear around the building would have paid for the needed architectural service.

Some denominational boards are requiring that a part of their financial aid shall be used to pay for adequate architectural service. This is just for churches that require outside financial aid.

We must promote the understanding that the cost of architectural service is one item in the regular cost of constructing any building that must not be excluded.



XII AMERICAN CHURCH DESIGN FOR TODAY AND TOMORROW

Through the exterior appearance of the building, the church makes one of its most important contributions to the religious and cultural experience of the community. Persons without number may receive impressions of value in their religious life simply by beholding the House of God ever present with them. This is one of the important functions of the church. The architectural designer who is concerned for the function of the building must remember this. The church building's function does not end with simply providing a shelter for the congregation and for the activities carried on within the building. Church architecture has affected the lives of myriads of people who have never entered the portals of the church building. The physical existence of the church structure with its effective design reenforces religious life in the community wholly apart from the activities of the church program. Here is where some of the so-called modernistic church design fails utterly. The church building must be distinctive and instantly recognized as a place of divine worship when seen by the small child. It proclaims the fact of religion and of belief in God existing in the community to such an extent that a congregation has been eager to make sacrifice to erect the edifice. And if a tall church spire enhances this type of functionalism, then it is functional indeed and not a mere extravagance. The presence of the church building, if it is effective, challenges consideration of God. Church architecture must express religious truth. It must show in its texture the growing life of its time and the lasting ideals of the past. No one style of architecture is required for an effective exterior design. One might wish that style might be forgotten and ask only "Is the design suitable, expressive of its purpose, and beautiful." Great expressions in architecture do adhere to the fundamental principles of design. Suitability, propriety, coherence, harmony, consistency and balance must be present in good architecture of any style, or of no style, if it is effectually to serve the purpose of a church.

The wise leader of a church building program will crave the ability to raise the questions and offer the criticisms that will help the congregation to have confidence that the architect's exterior design which they approve will result in a building that will impress the community with those excellencies that are associated with religion.

The church building design should express aspiration. Architectural lines that have an upward trend aid in expressing faith and praise in the midst of a materialistic world. Endurance, shelter and welcome should be expressed.

The effectiveness of exterior design does not depend upon size or cost. Let the volume of the building be decreased rather than accept shoddy materials or defects in design.

Architectural design must be something alive! Effective design will not be of a stereotyped or imitative nature. There is no excuse for a church building looking like an edifice built at another time and place, unless imitation is desired or those responsible for the design lack soul and creative spirit. It is of the highest importance that the Church lead in creativeness in architectural design. Here, evolution rather than synthetic assembling mechanical forms is desired. Good church architecture will only grow out of deep religious feeling on the part of people and architect. The Church must succeed in putting religious life and force into the lives of the people if church designs expressive of religious ideals are to be created and accepted. There must be an intelligent appreciation of fitness, of reality and of beauty. The Church represents the Eternal in the world; it must not employ passing fads in design or untried materials in construction; yet it must express itself in a vital, living art.

How may we secure good design for a building problem?

First, don't tell the architect that he must present a design in only one order or "style."

Secure an architect who will make an individual study of the problem, its history, traditions, surroundings and ideals. The church will not approve his offerings until convinced that the best possible design has been achieved, but don't tie the architect's hands and stifle his creative ability by telling him the design must be in any certain "style," before he begins his work.

The materials of construction influence the effectiveness of the exterior of the church building. Honesty, sincerity and grace in the work of the Lord demand that materials and construction be what they appear to be. How disappointing it is to find that what at a distance appeared to be a brick church is only a shell of brick over wood. Materials now almost universally available make it possible to have a wall of solid, fireproof masonry. Never have frivolous or meaningless work such as spotting stones (set on edge!) about in a brick wall. Don't have concrete blocks made to imitate stone.

A brick wall of carefully designed color arrangement is beautiful, appropriate, durable. Avoid light-colored or buff brick,

Stone, of course, seems most suitable for the church. It seems to express strength, durability, and confidence. But whatever the material chosen let it be the best that can be paid for and used in honest fashion.

Opposite Page — Four preliminary designs offered for Westwood Methodist Church, Los Angeles. (Chapel already erected.)

Upper right design chosen.

Thomas and Wagoner, Archts.



CREATIVE CHURCH DESIGN

The exterior design largely determines the message which the church will succeed in giving to great numbers of people. Many will not enter its portals unless, through its exterior design, the church proclaims in pleasing tones a message of welcome and of promise. Before entering the building itself the worshiper should become conscious of an atmosphere that stirs the devotional spirit.

A good designer will distinguish between good style and mere fashion. The church should be designed for permanence. He will avoid tricks and fantasies that speak of passing fads, neither will he seem consciously to strive for style, thereby most likely failing to attain it. We do not wish to know that the designer coldly copied a style of the last half of some past century. We wish to know that the language of architecture is in his soul and that his design is a sincere expression.

A beautiful building is of inestimable value to the community. The terrible ugliness of our cities and towns contributes to bitterness and crime.

ARCHITECTURAL STYLE

But someone insists, "What will be the style of our new church building?" "I want nothing but Colonial style," says another. And of course, we must pay attention to these demands. Architecture is a language. We must be careful that it really speaks in a language other than slang or jazz, for architecture is a musical language and can be sublime or frivolous or wholly unintelligible. The leader and members of the committees that are guiding the church building enterprise should become quite well informed regarding the evolution of the different styles or orders of Christian architecture. They will find that no style came into being full blown of itself, but that there has been an evolution of architectural expression through the Christian ages. Here too is where the so-called "modernistic" designers fail. They try to create a synthetic expression wholly divorced from the accomplishments of the past.

We return then to Chapters II, III and IV in which the development of architectural expressions was traced. The different styles evolved through gradual changes. At the present time we are in a most difficult period in the history of church design. Many wish to select one of the historical styles and build in keeping with it. Others wish to break entirely with the past and create something new but very seldom with satisfactory results from the standpoint of the purpose of the church building. Then there are attempts and some with very interesting and pleasing results, to work in the spirit of ancient expressions but unhampered by close adherence to precedent.

This has been accomplished in a few civic buildings with astounding success. In the beautiful city of Lincoln in the great agricultural state of Nebraska stands the state capitol designed

by the late Bertram G. Goodhue. This capitol is not a stupid accumulation of small domes, great high banks of steps, pillars that support nothing, great high windows and extremely high ceilings topped off with a great dome with a silly robed figure of some ancient mythical character surmounting the top. The building rises high above the plains and dominates the city and the landscape. On top of the building is the figure of a sower. The ornamentation is not made up of pagan eggs and darts and other ridiculous and to us meaningless symbols, but the golden grain and the fruits of the great empire of the West are built into this building. This is all in true harmony with the Gothic spirit in architecture which is an eternal striving for perfection, the exterior design and the whole spirit of the building dominated by the vertical note.

In his church buildings, also, Goodhue succeeded in working in harmony with the eternal ever upward striving spirit if the Gothic but creating buildings that are functional and suitable to these times, and instantly recognized as churches. See for example, St. Thomas' Episcopal Church, Fifth Avenue and 53rd Street, New York; St. Vincent Ferrer Church, 869 Lexington Avenue, New York; The Chapel of the Intercession, New York. While Gothic distinguishes the greatest upward reaching in material form of the worshiping soul, its effectiveness does not depend upon the size or cost of the building.

In the Gothic expressions a great faith found sublime expression. It was not the eternal beauty only of those masterpieces in architecture but the inner striving for perfection which they evidenced that we should strive for today if we are to create satisfying architectural expressions for these times and for tomorrow. See Pages 4, 8, 9, and 22.

The leader in the church building enterprise must help his people to distinguish between what may prove to be a mere passing fad or fashion and an orderly achievement that will not become wearisome—a building so designed that whether, large or small, one will wish to return to it again and again to find the ministries to his soul that beauty and fitness should give. A church that succeeds in achieving the results desirable in the Gothic spirit expresses in every line lofty idealism.

Many churches that have been called Gothic in our country have utterly failed to reach the ideals of good proportion, beauty and suitability. They have been ugly, in bad proportion, bad in detail, utterly unworthy of the term Gothic.

After the floor plans have been fairly well developed during the architect's preliminary planning, he will then present exterior sketches offering his solutions proposed for the designed problem. But it remains for the people to reject or adopt the architect's exterior design. If the people become thoroughly and sincerely intelligent regarding architectural art, they may by their responses and intelligent enthusiasm, assist the architect in achieving the design most suitable for their church. However, wise churchmen will trust the architect's superior experience and knowledge and encourage him to produce a design that will be truly satisfactory. Here are some questions that may help the people to approve a good design.

Does it look like a church?

Does it indicate that the Church reaches far into the past and will continue to exist as long as the world stands?

Or will it mark a passing fad and a shallow period in America's cultural life?

What is distinctive, making it evident that it was designed for this congregation and not for another time and place?

Is it inspiring?

Does it indicate a place where one would be glad to pray and to worship?

Is durability of style and material indicated?

Is it suitable to the site and its setting?

Is it well designed from the viewpoint of the principal approaches to the site?

Does each part of the building have a reason for existence?

(Do buttresses actually support anything?)

Are any elements contrary to the principles of simplicity, honesty, sincerity, character and interest?

Is the design one that will prove continually to be interesting?

There are features of architectural design that are inconsistent and incorrect. We must depend upon the architect to avoid these things. It is not enough for us to say, "we do not like" something. A superior question is, "Is it correct and is it right to do so?"

A successful architectural style is not chosen. It is a matter of achievement.

THE DESIGN OF THE INTERIOR

Very skillful architectural design is necessary in order that the main sanctuary and the interior of all the other rooms in the building are effective for their several purposes. On employing an architect be very careful to learn who on his staff is in charge of the work of design; whether such person is likely to be a permanent member of the staff at least until your building has been completed.

We all agree that a church building should have comfortable seats, good acoustics, efficient heating, ventilation and lighting. A church must be more than just a building. It must so be designed that when we enter it we are moved to the attitude of prayer and praise. It must be a place where the sacraments of the church and all parts of the services of corporate worship may be celebrated with fitness and beauty. It must be a place where we can worship God in the Beauty of Holiness. Whether the church is small or large, it may have the qualities of sincerity, nobility and greatness which are found in all architecture that was successfully created of sincere faith in a God of infinite goodness and power.

The appropriateness of a church building for its divine purposes depends not upon the cost of the structure, but on the quality of thought that is put into its design, and this inner spirit that results in effective interior treatments must serve the rooms for children's work and the recreational rooms as well as in the main sanctuary and the chapel.

GOOD PLANNING

All the plans of the building must be in practical touch with the work done within a building; arrangement, relationship of rooms, corridors, storage rooms, must be laid out with regard to the usage and convenience of those using them. The science of planning requires careful analysis of the uses of a building as a whole. An architect who may only have entered a church by the front door may not think of placing the chancel at the end of the building opposite the church school.

The leader and the committee members charged with securing a church building that will enable the church to conduct its work with the greatest effectiveness must be able to criticize the matter of plan and assure themselves and the congregation that the architect has given them a workable and efficient floor plan layout.

The preliminary floor plans come first in the work of the architect. We build the building from the inside, not from the exterior although we have put the matter of exterior design at the head of this chapter. A good workable plan may be clothed in any desired "style" of exterior design.

Great progress has been made in planning modern Protestant church buildings. The rooms that one wishes to find readily upon entering a building are placed where one should expect to find them. Floors are level; there are ample corridors providing easy access to all parts of the building; spans are not too wide; children are given the most cheerful rooms and are placed on the main floor. Frequently the chancel is at the end of the nave opposite the church school and recreational units of the plant. This has many advantages in usage and works out excellently in design. For the modern church is, not just a meeting house which one enters at the front door and leaves at the same door.

Church work has extended horizontally into all realms of life. We have not only the sanctuary for worship but rooms for teaching and learning and for experiences of fellowship. The main entrance, therefore, might very well be put at a middle point in the floor plan and not at one end. This main central entrance can be marked by a tower or other feature which becomes the climax of the exterior design and masses of the building on either side of this high point. When the spire is placed at the front and the building stretched out like a train of cars, the design is not too successful. But many architects and consultants have to battle strongminded individuals on the building committee who insist that the church must "face" in a certain direction with the front door and a steeple at that point. They forget that the church has expanded into a horizontal plant growing far beyond the one room meeting house. Modern church building must look well from all sides and it is sometimes difficult to tell in which direction it "faces." This theory is not new; the great Cathedral of Notre Dame in Paris has a very imposing front facade but the rear with the slender spire leading the eye upward to the great towers presents an excellent and most effective appearance. It looks like a completed product in design from every viewpoint.

A suitable plan must provide for future extensions without the necessity of destroying existing construction, and without rearranging the principal means of circulation through the building, and so heating, plumbing and wiring can be extended. Provision must be made for future additions without destroying the effectiveness of the design. This program for future extension may be provided for in any style of architecture.

THE MATERIALS OF CONSTRUCTION

While great progress has been made in recent years in manufacturing of new building materials, no church needs to delay its planning in the hope that marvelous new materials need measurably to affect church planning. The church must use durable materials and must not introduce new materials, methods of construction or new equipment until these have all been tried out in other construction so that the church will not be put to the expense and possible loss due to experimentation. We shall let others do the testing and experimenting. We know what can be done with stone, brick, wood, concrete and steel. There is always a possibility of overdoing a new thing. For example, it is reported that in one public school room where the wall was made of glass blocks and where no transparent glass windows were provided, while the room received a great deal of light, it was difficult to control the amount of light and since the children could

not even glance out of the windows, this unnatural situation resulted in nervousness and conduct problems which, it would seem, one might very well have anticipated. Perhaps those who worked with children did not help plan the building. The development of glass as a structural and decorative material has greatly increased during recent years and, of course, there are places where structural glass may well be used within a church or church school building.

The development of many types of building tile is helpful in church work. In a recreational hall, for example, tile may be used for surfacing the walls so that beautiful color and also successful acoustical results will follow. There are insulation materials that obviate the use of plaster. New materials make it utterly inexcusable to have bad acoustics in any room. Manufactured roofing materials that are durable and fireproof and suitably colorful are also to be provided in great abundance. There are satisfactory new, well tested flooring materials in great variety.

FLEXIBILITY OF PLAN

Put this item prominently on your check list. Non-load bearing partitions may be removed or shifted. Have all rooms accessible from corridors. Have rooms of different sizes. Have at least two doors for all large rooms. They may later be divided.



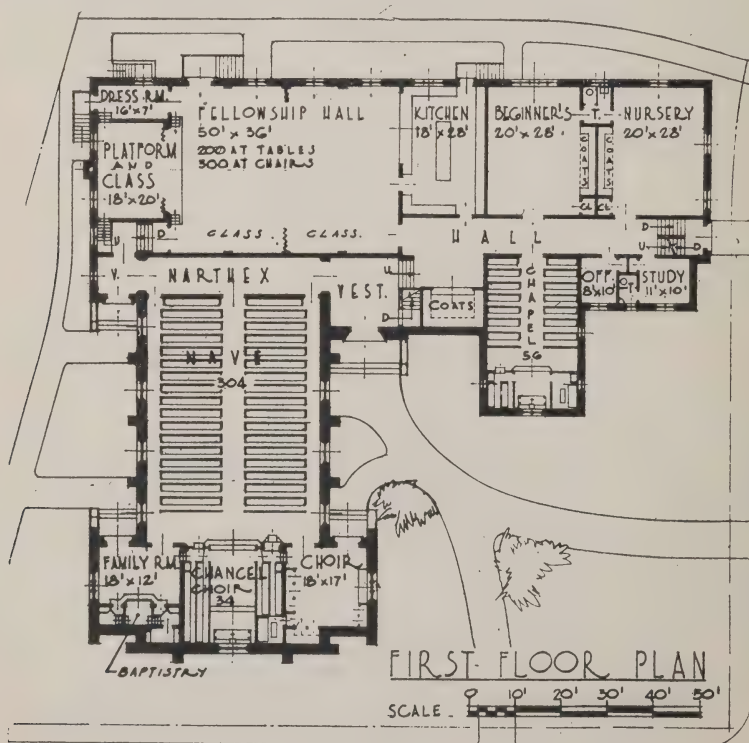
A "Modern" Design

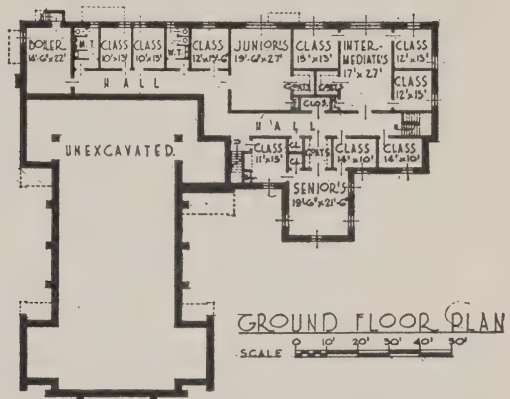
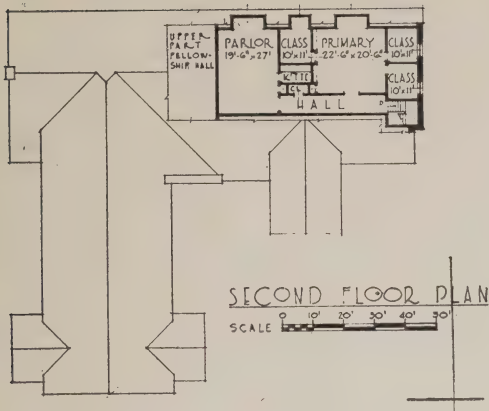
Confer, Architect



Preliminary sketch design and plans for Christ Methodist Church, Canton, Ohio. Wenner and Fink, Architects.

This is such a first sketch as architects offer for study as a possible and recommended solution of a certain building problem. Note the important rooms on the main floor.





Ground floor and second floor plans of design on opposite page.

Let us study further the main floor plan. The main entrance to the plant gives easy access to all parts of the plant. Note the location of the chancel with relation to the rest of the building. This church is allotted a new residential area as its responsibility. A baptistery for immersion is provided in a room that becomes a baptistery chapel. Communicants' rails are at front pews in nave and chapel.

A room by room study is necessary to enable one to realize all the facilities packed into this scheme.

The lot slopes to the rear and is capable of further grading. Therefore rooms may be placed on the lower level above the grade of the ground. Yet the main entrance has but three low steps.

Any desired form of exterior design may be used.

The low walls and "churchly pitched" roof help give the exterior design character and interest with economy of construction.

The fellowship hall is spanned by the open timber roof giving it a high ceiling.



Nave, Chapel, Offices, School
 Preliminary Sketch, First Presbyterian Church, Jackson, Miss.
 Thomas and Wagoner, Architects



This church insists on having a building designed in the "Colonial" order. In keeping with this stipulation, the architects endeavor to provide distinctively for this very important congregation, a design that is in harmony with the spirit of the historical "style" but without slavish adherence to tradition.

The fellowship hall is at the rear of the nave at the side walk level.

Left — Trinity Methodist Church, Chicago, Ill. Jansson and Stoetzel, Architects. Modern materials in walls and ceiling eliminate use of plaster and insure correct acoustics.

BASEMENTS

Basement space needs to be planned with the care and consideration that is given to other parts of the building. In northern climates, if a basement is not constructed, the foundation is usually carried about as half as far into the ground as would be required for the walls of a basement with an 8 or 9 foot ceiling. Hence there is a certain economy in providing basements but never under any circumstances should the social hall be placed under the nave. And never any rooms with ceilings more than 8 or 9 feet high.

The excavation should not be carried down to a depth of more than 4 feet below grade. The floor and foundation wall construction must be damp proofed and mildew preventative applications supplied. Adequate light and ventilation must be supplied and this cannot be done from tiny basement windows set in area ways.

If there is an adequate site, grading can be done to give a sunken garden effect so that good light and ventilation can reach down into the basement rooms.

During winter months as well as in summer artificial ventilation is important for the stale air that goes to the floor absolutely must be withdrawn from basement rooms in both winter and summer otherwise they should not be used for any type of church work.

Concrete floors should never be left bare. Pleasing floor coverings warranted for use over concrete below the ground should be used. Such rooms as can be provided in a basement, excavated to depth of about 4 feet are adult class rooms, (never children's rooms), club rooms, hobby shops, storage space lavatories, lounge rooms with fireplace and kitchenette, and of course, the heating plant. Rooms for table and floor games can be provided, and dark room for the camera club.



A
YOUTH
CENTER



Architect's first sketch for chapel, church school, administration and recreational units of a new plant for Highland Presbyterian Church, Fayetteville, N. C. Thomas and Wagoner, Architects

Many churches need to erect such units as additions to existing buildings. Note excellent fellowship hall at the right with high ceiling and at main floor level.

Here is a justification for an adequate ministry of fellowship and recreation in the church, as written by St. Luke, the Beloved Physician (2:52) "Jesus increased in wisdom and stature and in favor with God and men."



Methodist Church
Red Bank, N. J.

An example of
"Modernized Georgian." The wing at
the right was formerly a residence.

VENNER AND FINK ARCHITECTS

Gardena, Calif.

Chapel at Latin-American School.

INWOOD ARCHITECT



"Close up" sketch of detail of
sketch at top of opposite
page.

Figures of persons are to
help us estimate the scale of
the building.



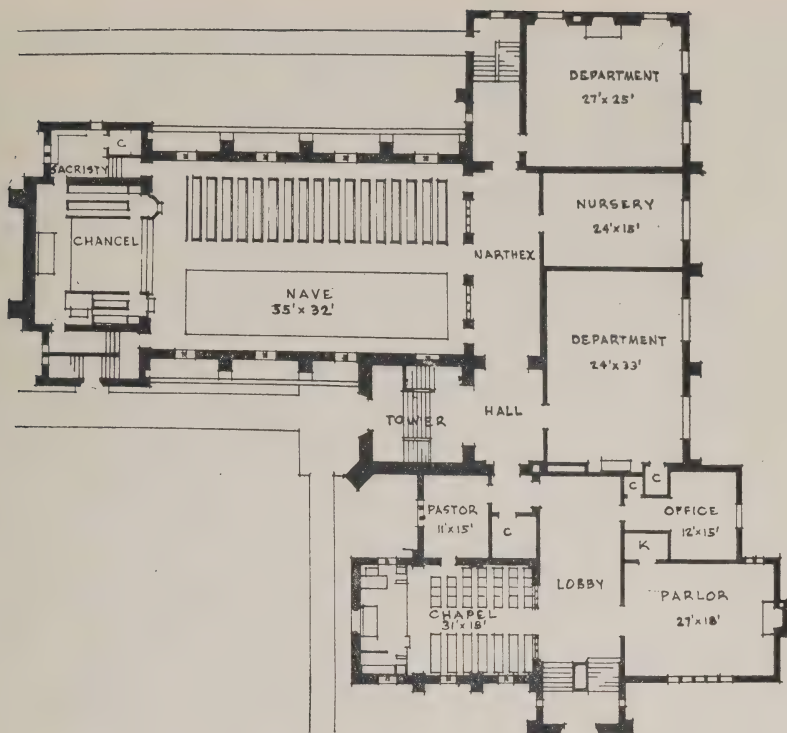
JANSSON, ARCHITECT

**Chancel, Nave, Main Entrance, Chapel, Parish House
Study for Pilgrim Congregation Church, Lansing, Michigan**

A vigorous, straight-forward design. The exterior design describes the floor plan.

The tower forms the "climax" of the composition. It both unites all parts and also assists the worship unit in maintaining its proper position of Chief emphasis.

The chapel indicates the needed relationship of Christian education proper position of chief emphasis.



Lansing, Pilgrim Church. — Main Floor Plan. An easily read plan.

The chapel near the “weekday” entrance will always be available for personal worship and devotion in the midst of busy or trying days. The pastor can use the chapel in connection with his counseling and personal rehabilitation work.

The chapel and parlor will be much used for weddings. The pastor’s room becomes a family room for funerals.

The fellowship hall is on the second floor. The second and ground floor plans are not shown.

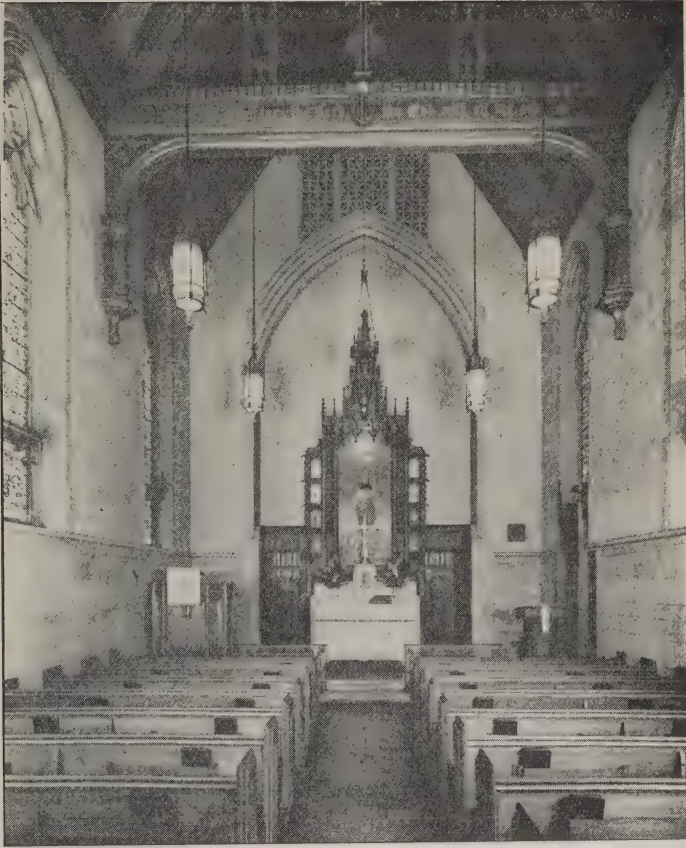


NORTH AND SHELGREN, ARCHITECTS

First Baptist Church, Bradford, Pa.

XIII BUILDING FOR THE WORSHIP OF GOD

The very highest purpose of the church building is for the corporate and private worship of God. All other parts of the building are subordinate to the nave which is the principal part of the sanctuary. The term "sanctuary" as we use it means the entire space used for public worship including a choir and chancel. This is in an effort to avoid the use of that horrible word when used for church purposes, the "auditorium." An auditorium is a place where people may sit to listen and observe. It may be cozy and homelike but the Church of God is a worshipping congregation. Worship is an activity and not merely sitting passively to receive. The church sanctuary is planned not for the congregation only but also for the requirements of the minister, the choir, and the others who assist in the highest of all human experiences, the worship of the Everlasting God.



WENNER AND FINK ARCHITECTS

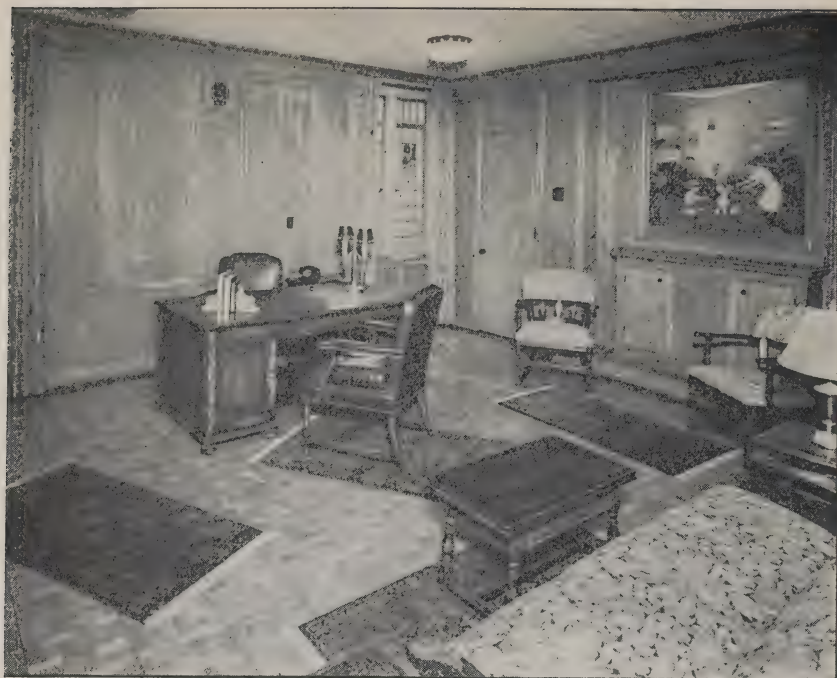
The Chapel in Trinity Methodist Church, Youngstown, Ohio

Where a chapel is provided, it is used usually more often than any other room in the building except the offices and conference rooms. It is open continuously for individual worship, prayer and meditation and is used for communion services, departmental meetings, junior church, devotional meetings for many groups, weddings and funerals.

On page 70 two rooms of the highest importance in the same building are shown.

At the top the pastor's room for study and conferences with individuals, small groups and families. Such a room must be in the church building, not in the pastor's home. (He will need a private study there too).

The Choir rehearsal and music room shown by lower picture. Note such details as light fixtures, windows, robe cabinets, furnishings, all designed by the architects.



WENNER AND FINK, ARCHITECTS

THE REQUIREMENTS OF AN EFFECTIVE SANCTUARY

Those who lead in the planning of the Place for Public Worship must be assured that the sanctuary will contribute by its total setting and by the environment it creates to the accomplishment of the purposes of the activities which it is designed to shelter. The room designed for effective private or group worship does much more than shelter the leaders and participants in the exercise of divine worship. The well designed room encourages and advances worship. The room must be inviting, a place where people will be glad to come. It must create in the worshiper a sense of nearness to God without a feeling of withdrawal from other worshiping persons or complete isolation from the world. Just as the needs of the crowd were in the mind of Jesus while He was on the Mount of Vision, so the Sanctuary will not be a place of escape but of vision and reenforcement, from which the Christian will be encouraged to go back to the ever present round of human living and service.

There must be no intruding elements to distract the attention of the worshiper—no glare from badly placed windows or from bad lighting. A well designed Sanctuary will have a chief focal center. This will invite attention and secure interest. Beauty of line and color and glorified light from the windows will lead the individual and unite the congregation into the fellowship of worship. Symbols will help the worshiper recall great heights of Christian faith.

There are innumerable details of design and construction which this little book can not mention. We are trying to maintain the viewpoint of the worshiper. The architect has spent years in technical study and we trust him to plan roofs and walls that will not leak, to select materials that are fitting and durable, and to advise regarding the best available craftsmen and mechanics to do this sacred work.

The sanctuary plan, provides several principal elements—the nave for the congregation; a chancel containing in most churches the choir, the pulpit, the lectern, the baptistry or font, possibly a communicants' railing, an altar or communion table, and clergy stalls; a narthex or vestibule, which is the place of transition from the outside world to the place of worship; and the sacristy for storing and preparing equipment for use in the communion service; and usually space for the organ and console. (A traditional location of the baptismal font is near the entrance to the nave).

The joining of the chancel to the nave may be marked by an arch, although not always, for there is an advantage in carrying the roof line above the nave clear through to the chancel wall. In many churches there is a distinction between the chancel and the choir. Sometimes the beginning of the chancel is marked by a step and communicant's railing or a rood screen or rood beam. There is a definite trend in Methodist Churches, for example, to have the communicants' railing directly in front of the altar or communion table.

After deciding upon the space and minimum requirements for a successful chancel, the nave may be planned. In determining the size of the nave, keep in mind how frequently it is to be used. Are we to expect everyone to attend worship at the same hour, and at all other times to find a church with closed doors? The rapidly developing trend toward having at least two services on Sunday morning will make it possible for wise churches to have edifices of more excellent and permanent construction, well filled on ordinary occasions. Several services may be held on special days. Money may then be saved for improved quality in the building and for increased leadership.

Insist that the nave may not be too wide in proportion to the length. This has been one of the outrages in American church building—great wide naves requiring an excessive roof load and increased height to avoid a squat appearance, the result being a “glorified barn” type of church. Proper proportion demands that the height of the side walls be increased as width and length are increased. It is difficult to provide a focal point for a square room and to avoid the impression of emptiness.

The acoustical results are better in a room that is much greater in length than in width. The voice sounds travel directly forward with greater speed than sound waves spread laterally. The congregation is seated more directly in front of the speaker.

The clerestory type of construction with side aisles separately roofed greatly improves the proportions of the room. There has been a fear in some Protestant churches that late-comers might be seated behind a pillar (where they may well deserve to sit) and the many advantages and economy of wide side aisles have been overlooked. The clerestory type of building eliminates, in proportion to the floor space, considerable volume from the heating load. The clerestory windows admit light to the middle of the nave. The excessively wide roof spans are avoided.

As compared to a gallery, overflow seating space in the side aisles has many advantages. A gallery is a very questionable convenience. Sometimes the height of the entire building has been increased several feet in order to have a gallery. Never extend a gallery beyond the narthex. Before deciding upon a gallery, remember the cost of the two stairways necessary for safety and the number of sittings eliminated from the main floor plan by these stairways.

Do not fill the entire floor area with fixed pews. The floor of a church must be level. Have a removable platform within the pulpit if thought necessary, but never have a sloping floor.



WICKES AND KRIEHN, ARCHITECTS

Central Christian Church, Kansas City, Kansas

A rose window in rich colors gives an eternally satisfying "high point" to a sanctuary composition. (The perspective view from the pews eliminates view of wall between dorsal and rose window.)



CONFER, ARCHITECT

Rosedale Park Lutheran Church, Detroit, Mich.

THE CHANCEL AND ITS EQUIPMENT

In this little book we consider all of the space in the principal worship room of the church beyond the space in front of the first pew as the chancel. Usually a chancel contains the choir.

From the standpoint of practicability, as well as of effectiveness, the chancel arrangement, increasingly is found most satisfactory in churches of all types throughout the country.

The choir is not on display and does not face the congregation, yet the choir is visible as part of the worshipping congregation. The choir leader, following an increasing demand, need not be conspicuous and yet, standing in one of the front rows, he may give effective leadership. The pulpit may be so placed that choir director, organist and console may be hidden. Of course, some of the greatest choral singing in the world is done without a leader being visible to the congregation. The chancel proves a suitable focal center for the sanctuary. The arrangement gives to each part of the service its meaningful setting. The plan, is suitable for the use of a communion table or an altar. It permits the congregational method of administering the communion service or the one whereby the communicants leave their seats and "go forward to the table of the Lord." The plan may be arranged with or without a communion rail. The pulpit provides a special position designed exclusively for the ministry of preaching and magnifies the high importance of that ministry in the Protestant churches. A baptistry with beautiful drapes fits perfectly into the "chancel plan." The choir and minister may make a dignified and proper entrance into the chancel at the front center rather than entering from the sides like players coming upon a stage or sneaking into the chancel.

How much must the leaders (pastors and building committee) know about the many details involved in a church building plan? Who will be the final judge as to the height of a step or an altar?

It should be possible to leave all details in plan and design to the architects and consulting adviser, but usually the minister and other workers will wish to assure themselves that objectionable elements will not obtrude upon their use of the building and its equipment and that all equipment is designed to facilitate their ministry. A study of all requirements and a system of checking all details before approving the plans will insure against future regrets. The following data are offered, not dogmatically, but as suggestions for some of the things to be carefully analyzed and determined before the working drawings have been authorized:

Altars. Height from the floor beneath the altar, 39 or 40 inches; length, 8 to 12 feet, not less than 7 feet in a small church—in small chapels within a church building, 5 to 7 feet.

Height above floor of the nave in large churches, 7 steps (35 to 42 inches,) never more! for most churches, 3 to 5 steps.

A vista of length through the chancel is even more important than the height of the altar.

The predella. (step in front of the altar) 36 to 42 inches in front; 6 to 8 inches at ends.

The Communion Table. Height, 36 inches; width 24 to 30 inches; length, follow suggestion for altar. No step directly in front.

The Dossal or Dorsal. To assist in commanding attention due the focal point of the room. Seven or more feet high. May hang so as to show vertical folds or may be made with vertical stripes. Remember that the purpose of the dossal is quite different from any other drape or fabric. A far more dignified effect is given when there are no vertical folds.

The Reredos. A screen of wood or carved stone back of the altar.

The Triptych. A reredos about as wide as the length of the altar, with hinged shutters to close off the pictures during Passion-tide—frequently used for chapel altars.

The Gradin. (table, shelf) A shelf at the back of the altar. A relatively (15th century) modern fixture.

The Cross. May be of brass, carved oak, wood polychromed or finished in gold leaf.

The Candlesticks. To match the cross. Never to be as high as the cross. All to be designed by the architect to be in proper scale as to size and their design to be in keeping with the entire setting.

The Missal Stand. To hold the open Book upon the altar or table. May be of wood or metal.

The Baptistry. Depth and width to depend upon method of administering the ordinance. Have the curb about 8 inches above the communion table.

The Font. Should be of stone. Good results possible in wood. Have a drain leading to the earth. The font must be large enough to be significant of its purpose—not merely an incidental piece of furniture. It is a symbol of regeneration. Height about 36 inches top not less than 24 inches across; base about 20 inches in diameter; shaft about 14 inches. Should occupy a fixed position. May have a kneeler or prayer desk in front. Should have a cover, which may be very plain or a work of rich art.

The Rood and Rood Beam or Rood Screen. A means of demarcation between the nave and choir (or chancel). The rood or cross may be suspended from the ceiling on chains clearly strong enough to support the heavy cross. Do not use invisible wires or any such silliness in God's House. The rood beam or screen offers excellent opportunities to employ art in the services of the church. Do not attempt selection without the services of an architect who can speak with authority about such things.

Clergy Seats. Should be fixed bench-like against side walls of chancel. (The minister is not seated as though presiding over a meeting or conducting a forum.) High backed, ornate chairs are out of place in the chancel. A prayer desk may be placed in front of the clergy seat so that at least the minister may get down on his knees before God. The desk has a sloping top—8 to 12 inches wide—with a narrow strip to hold books; 30 to 32 inches high to lower edge; a shelf underneath; and a kneeler that will fold back (noiselessly.)

The Pulpit. Not less than 38 inches wide inside. It must be neither a barrel nor so bulky that the preacher appears to be driving a ship. Inside height 37 inches to 39 inches. Should have a removable platform for preachers of short stature. Shelf for a watch. Book board about 12 to 16 inches by 13 to 17 inches in size. Avoid a light fixture on the pulpit or lectern. If a microphone is needed, have it hidden from view. Let the height of the pulpit from the floor be reasonably fixed by the architect. Let the top edge be visible from the rear seats. Do not place it too far to the side of the nave. Extend the pulpit floor a few inches to the back.

There is no traditional rule as to which side of the chancel the pulpit or lectern should be placed. It seems convenient to have the pulpit and console on the side opposite the soprano side of the choir.

Communicants' Rails. Formerly marked demarcation between the nave and people and the sanctuary for the priesthood. After the Reformation in some communions the communicants' rail was moved back to the altar and the Protestant worshipers approached the altar or table. The rail was discarded in some denominations. The rail serves very practical purposes. The present trend is toward its restoration, especially in the chapel. It clearly invites the worshiper or penitent to kneel before God. It is not a railing in the sense of shutting persons away from any area, but indicates an invitation to approach the Holy Place and to fellowship with God. Neither is it just a rail but a lengthened prie-dieu (prayer desk). It is built for a person to use when kneeling.

Height above cushion, 24 to 25 inches at highest point; the top, 6 inches wide. (A slanted base upon which the kneeling cushion lies, 14 to 16 inches wide.) A portable section may be inserted at the center opening for communion services.

The Credence. A small table or shelf to hold the communion elements before they are consecrated. The alms-basin and offering plates may be placed upon it. Never, never, place empty offering plates on the table or altar!

Piscina. A very important piece of equipment, usually a niche to hold a basin of water with which the minister is to cleanse his hands before administering the communion.

A Sanctuary Lamp effectively indicates welcome; eliminates empty aspect of the room.

ROOMS AUXILIARY TO THE SANCTUARY

The Narthex. The space in the church building that one enters immediately upon leaving the out-of-doors is of too great significance and importance to be supplied by just any vestibule. In ancient Christian churches, the narthex, which was a closed porch, accomodated great companies of pilgrims and persons who wished to attend Christian worship and preaching but who were not yet members of the Christian community.

The narthex must give a sense of welcome. It must express a promise of uplift that one expects to find in the worship experience. The most careful attention must be given to flooring, decoration and lighting the narthex.

A plan which places the church school rooms at the rear of the nave has so many advantages that likely it will continue and increase in usage. In this plan care must be taken not to squeeze the entrance to the sanctuary into too small an area. It is important for those coming from the church school rooms to have this space for mental and spiritual preparation for services in the main worship room of the church.

The Sacristy. The sacristy is used for storing and cleansing the communion service and sometimes for the minister's robes and books, and other equipment used in the service. It would seem better not to have the communion service stored with the kitchen and dining room equipment. The sacristy is usually adjacent to the chancel, and must be equipped with a sink and hot water, or a provision for heating water.

The Pastor's Room. Formerly the sacristy was also the pastor's room for preparation just before the service. Where it is desired to have a processional of the choir and the minister into the nave, it is more convenient to have the pastor's room easily accessible to the rear of the nave. The Pastor's Conference Room may serve as his retiring room before the service. Provision must be made for hanging robes. A sacristy adjacent to the chancel will be very convenient as a pastor's room for certain occasions. A lavatory should adjoin the sacristy and the pastor's room.

Choir Vestry. It is important to assign a room for choir assembly and robing where other groups meeting before the worship service will not be interrupted. Cupboards for robes, music and books should be provided. Let all this important equipment be specified as may be required in the very first program to be handed the architect. Have closets, cupboards, drawers, etc. so planned that they will be "built in" during construction of the building. Have the choir room treated acoustically so the choir may sing there at full volume during rehearsals.

Cloak Rooms. There is no good reason for a person's entering a service of worship encumbered with cloaks, hats, rubbers, or dressed as if to face a blizzard. If the chancel is at the end of the nave opposite the parish house section of the church building, it then becomes very convenient to discard such impedimenta before entering the nave. Rooms located just beneath the narthex will be very convenient.

RELIGIOUS EDUCATIONAL VALUES IN THE SANCTUARY AND THE CHAPEL

Children are highly susceptible to the influence of beauty. An 11-year old girl turned and looked upon the great rose window in the Cathedral of St. John the Divine in New York, and exclaimed, "Oh, Beautiful!" Pastors and teachers wisely make use of the church building in explaining to the children of the church school the reasons for the plan of the sanctuary and the purpose of the various furnishings. Symbolism in the windows and other parts of the building are a valuable means of Christian teaching. Children may be taught that it is a great privilege to enter the main worship room of the church and that they too have a place in its use and purpose.

Many pastors conduct classes in preparation for more active church membership in the nave of the church, where the sacraments and other phases of Holy Worship may be explained. Let church boards be not stingy in the matter of heating the nave for groups that may be small in number.

Frequently, the church chapel is used for the assembly in training in worship by church school groups. Do not assign the chapel for the exclusive use of any one group during the entire church school period. Different classes and departmental groups should be permitted to visit the chapel on occasion, and to conduct their services of worship and devotion there.

Some of the most effective religious educational work observed today is centered upon the worship of God.

FURNISHINGS AND EQUIPMENT

Seating in the Sanctuary. In planning to seat the congregation for services of worship and preaching, we must keep in mind the main purpose of the church—to house the services of corporate worship. We must ever hold this main purpose in mind.

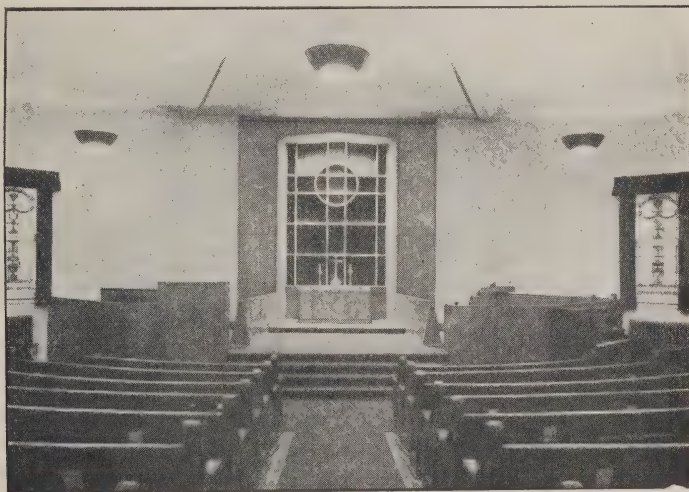
While the congregation should be seated comfortably and conveniently, the principal objective is not to entertain listeners who are seated cosily. Lazy lounging in a worship service is not to be encouraged. Persons may be seated comfortably and yet as though they are engaged in an interesting activity inviting constant alertness. A dining room chair is not built for fireside lounging, yet is one ever uncomfortable in a sensibly designed dining room chair while partaking of a good meal and interesting conversation? Listening to a sermon or to the other parts of the service should not constitute a complete definition of church attendance, but even listening to the sermon should be considered an exercise and more than inert passivity. One is reminded of the listener in the Scotch church so intent upon receiving the sincerely preached sermon that he was impelled to arise and stand until its end. (That **was** sermon listening!)

Church seating should be purchased with a clear understanding of its purpose, and should not be bought upon a salesman's representations alone. We question buying pews from a salesman at all. The pews and all of the equipment in the sanctuary should be designed by the architect. It is most regrettable to find fairly well designed sanctuaries filled with pews that are purchased without the benefit of the architect, the church evidently preferring to pay the salesman's commission rather than the architect's fee. The pews were **BOUGHT** rather than built from an architect's design and specifications. Pews should be **BUILT** to last for the life of the building. The manufacturer should furnish a bonded guaranty of durability and quality. The material and installation should be approved by the architect as meeting the requirements of the specifications. After approving the design and selecting the manufacturer to build the pews, you may have samples set up for final approval. **Know where the furniture is to be made** and consider the banking reputation of the manufacturer.

Pews should be spaced not less than 34 inches from back to back; 35 inches is better, especially when kneelers are used, although 32 inch spacing is common usage. Provide 20 inches per sitting, rather than the 18 inches usually estimated. Allow 22 inches to 24 inches per sitting in the choir pews. Examine and measure the pews and spacing thereof in some churches, and you will be clear about your own requirements. Also inspect a sample of the pew before buying.

Usually a screen is built in front of the first pew, but sometimes it is very convenient to have the front pew unobstructed. Screens are usually required in front of the choir. All woodwork must, for satisfactory results, be designed by and the installation supervised by the architect. Book racks and envelope holders should be constructed as a part of the pew. Many advise that this equipment be equal in length to the length of the pew. A shelf beneath the pew for hymn books may be considered, if care is taken that it is not an annoyance. Kneelers may be attached to the pews so that they will fold back noiselessly.

Several ornamental designs on pew ends, if any, should be used rather than the same symbol or design repeated throughout the entire length of the aisle. Avoid pew ends that encourage lounging.



Remodeled Corner Platform.

A terrible stockade of fake organ pipes, the organists' back and mirror! formed the focal center of the room. The nicely designed tone opening is backed by a symbolic red fabric.

Many badly planned churches must be continued in use for the corporate of many generations. Even the worst of them can so be improved that their effectiveness will immeasurably be increased.

XIV THE CHAPEL

The chapel as designated here is a room within a church building or a unit of the Church plant designed and furnished for worship and devotional purposes.

Increasingly the chapel is becoming the most used room in the church building. Its practical usefulness is seen in its popularity for weddings, as many as three being held in one chapel on a Saturday afternoon; special communion services; baptismal services; training in worship, prayer services, and other services of a religious nature. The chapel, effectively helps to make real "the church with an open door" without the necessity of opening the larger sanctuary for individual worship. Where a beautiful chapel is available, it is found that many seek to make it a sanctuary for private devotions, a home for the soul, for the individual who keeps his tryst alone with God.

In one small city, an undertaker's chapel, being the most colorful room for worship services in the community, has been called into use for many weddings as well as funerals. In many existing buildings, a well proportioned room may be found which may be made into a very effective chapel. It is quite proper in the main sanctuary to make the pulpit and communion table very prominent. In the chapel, devotion is the key-note for its use. More symbolism and rich color may be used. An altar more intimately indicates the place of sanctuary and refuge, and is thought by many to be quite suitable in the chapel, even when a communion table is used in the larger sanctuary. In a small chapel, both lectern and pulpit are not required. It is not necessary to have the room as well lighted for individual worship as for public worship. The principal focal center should be brilliantly illuminated; the rest of the room may be left without artificial lighting.

One end of the chapel might be furnished as a children's browsing and devotional center, with appropriate pictures and books. Increasingly, the children's chapel is found useful. The provision of a chapel for children is not an experiment. The children of the Second Congregational Church in West Newton, Massachusetts have had the privilege of a most beautiful chapel for more than twenty years.

Some religious educational workers do not recommend a children's chapel, considering that too formal a worship program is not suitable for the experiences of children. However, children's chapels, carefully designed and equipped suitably for the needs and responses of the groups who are to use them have been appreciated by workers and pupils. One chapel room may be used by two departmental groups for assembly and worship, thereby saving the cost of one assembly room. The growing trend to place "worship centers" in church school rooms indicates an appreciation of the importance of a spiritual content in Christian education.

A well designed chapel, while it is churchly and impressive, permits a certain intimacy with an atmosphere of reverence. A chapel can be used by two or three groups at different hours or on different Sundays for their more formal services of worship.

A baptismal font or baptistry (as in the chapel of the Riverside Church, New York) indicates the importance of the chapel for baptismal services. Let us hope that the custom of parading babies before the Sunday morning congregation will be eliminated, and that the chapel may be used for this service on Sunday afternoons or at other times, making it a service of great significance to the families and friends most concerned.

More frequent communion services may be held in a chapel, thus helping to solve the problem of providing frequently for this sacrament in churches with large congregations.

The chapel helps to make a varied ministry to many different people within the same Christian fellowship—and to people when in different moods and with changing needs.

There should be provision for instrumental music of the kind and quality through which the users are to be educated to a love and appreciation of the musical classics of religion. There should be room for a small choir.

What makes a room a chapel?

First of all—beauty. This does not mean elaborateness or costly equipment. A bit of color, a picture or symbol, a candle can transform a drab room into a sanctuary: Effectiveness of environment is provided. There is meaning in the place; meditation and prayer are encouraged. Effective proportions are almost essential. The length of a chapel should be at least twice its width, and the height should equal the width. The focal point of the room should be at the narrow side opposite the entrance, which should be at the extreme rear of the room. This “worship center” may be a communion table, or an altar with a cross placed upon it. The altar or table may be “backed” or shielded by a drape of rich colors (a dossal cloth). Blue, gold, red and purple are colors with symbolic meaning. The universal Christian symbol, the cross, signifies the purpose and nature of the room. Lighted candles induce attention, calm and devotion.



Before and after remodeling a platform into a Church Chancel.

An ecclesiastical red dossal cloth. Pews rearranged to provide center aisle. Pulpit just off of center aisle, but may hide view of altar from some worshipers.

The choice of chancel furniture—reredos, communion table, communicants' rail, and kneeler cushions—will be determined by the practice and ideas of worship which prevail. The seating for worshipers should be definitely churchlike in character and should therefore consist of pew-like benches, or cathedral chairs, with the height according to the groups by whom they are most often to be used. It should be remembered, one may sit comfortably on seating lower than necessary but only with discomfort can one sit on seats higher than required. Hence, if the room is to serve as a chapel for the children's use, lower seating than that used in the main sanctuary is necessary. Pews may be provided with cushions like those of the church itself. Open back chapel pews of attractive design can be provided at a cost no greater than equal accommodations of chairs of comparable character and finish. They are movable and permit of rearrangement for occasional formal processions or pageantry.

XV THE CHURCH AS A SCHOOL

The Whole Congregation a School

The early followers of Jesus were called disciples. That means they were learners of Him. Education has been a notable feature in the whole Christian movement. We now conceive of all the educational work of the local church, not as a separated program like Sunday school, a separated organization from the main work of the church, but as the entire membership of the local church being engaged in teaching and learning processes. The church school does not have an aim separate from the aim of the Church. In these processes various methods are used and different group formations are assembled for the several activities and different methods of learning.

Those Who Are to Use the Building Should Help Plan It.

Before discussing plans then, a church must determine what its educational program is to be on Sundays and weekdays. Do not expect an architect to begin preparing plans before a complete and detailed statement of the requirements of the educational work which the church has decided to conduct has been prepared. This is to indicate what groups are to be housed and for what types of educational work the rooms are to be provided and equipped, how many are to be cared for in each group, and the amount of floor space is required and how it shall be arranged.

Who is to prepare this statement of requirements? Not a "building committee" as we formerly have found it and certainly not a board of trustees. Those who are charged with the responsibility for planning and directing the educational work of the local church are the ones who should describe clearly and in complete detail the rooms, floor areas, characteristics of the rooms and all the facilities to be used in the whole educational program which today includes the nursery and the oldest groups in the congregation. The religious education of adults doubtless will be a major activity in the church program. None of us was trained to live in the kind of world which we now have.

The very first step toward a satisfactory building program for the educational work of the local church is to secure the best possible counsel to aid in assembling an educational program.

It is a matter of serious importance to determine the policies and program of so essential an educational institution as the local church school. The best available and most wisely experienced counsellors may well be employed.

The physical equipment is important.

The educational work of the local Protestant churches has been tragically handicapped by physical equipment which, in many cases, belonged to an era prior to what is required by the implications of the educational program to which the churches are committed. Many churches ought not to attempt to have plans

prepared for their church school work until much time, in some cases this means two or three years, has been occupied in bringing the educational program to the stage of effectiveness that would justify their planning for a new building to shelter and facilitate it. Much of this program, of course, would still be on paper until the new building is provided but the church must know for what kind of educational work they are to plan and train the leadership to occupy the new building advantageously as soon as it is completed. Most churches preparing to build, or to build the church school portions of the church building would do well to make a thorough examination of the effectiveness of the present work. Such a book as "Improving the Total Program of Your Church" published by the International Council of Religious Education, 203 N. Wabash Avenue, Chicago 1, Ill., would be most helpful in studying and analyzing the present work of the entire church as a basis for building a better program. The International Council will send a list of all their very valuable literature. Conferences with denominational leadership and official regional church school directors and workers will bring to bear upon each local problem effective help toward its satisfactory solution. Don't expect persons dealing with the education of growing and changing human life always to agree regarding the building and equipment needs.

When one church began to analyze its present program it was found that it lacked any clearly defined statement of goals, or any definite plan for measuring its progress as a Christian working force. After six weeks of study, spending one and a half hours each week, the group was then able to list ten definite goals toward which the work of the church would be directed; they then listed ways and means of attaining these high goals. The church proceeded to become an effective working force in the community and the leadership was then in a position to state what rooms, and equipment were needed. They proceeded to organize and to raise funds to secure the needed improvements. The entire congregation was led to realize why additional building and improvements in equipment were required and were ready to provide funds for the building program. They were convinced that adequate and suitable rooms and equipment are effective aids in achieving the purpose of the church—improved effectiveness in Christian living.

For What Purposes Are Rooms Needed?

In the work of the local church school several different types and sizes of rooms are required. Rooms are needed for assembly where groups learn to worship together or are occupied in some group activity. This may include dramatization, planning future projects, listening to a story, seeing pictures, sound films. Some church schools are organized into departments where three age groups may be gathered for one assembly. In larger schools there may be only two grades in an assembly group or department, or only one grade, each grade being conducted as a separate unit.

This latter method increasingly is advised in schools that have as many as twenty pupils to a grade. Rooms are needed for study and research; this means rooms that will be quiet. Provision is made for storing maps and other helps. Before planning these rooms it is necessary, then, to know about the groups that are to be assembled together and their possible sizes and ages for work in departmental or class groups. Special attention is called to the manual entitled "Building and Equipment for Christian Education" which may be secured from the Interdenominational Bureau of Architecture, price (in 1947) 50c.

A separate room should be provided for the work of each class or other group which meets under the direction of a teacher or leader. If this ideal is impossible, some plan of rotating the groups should be adopted. The following schedule of group organizations and floor space requirements has been assembled for certain schools. However, each building enterprise and each organization is an individual problem all its own.

Groups Children's Division:	Ages for Each Dep't	Floor Space Recommended per Pupil in Attendance
1. Nursery	to 18 mo.	20-30 square feet.
2. Toddlers	18 mo. to 2½ or 3 yrs.	20-30 square feet.
3. Nursery Class (not more than 15 to 20, at most, children in one room)	2½ or 3 yrs.	20-30 square feet.
4. Kindergarten	4 and 5 yrs.	18-25 sq. ft. (rooms to be provided so that not more than 20-25 pupils are in a room).
5. Primary	6, 7, 8 yrs.	Work rooms for interest groups or classes, one of which will be large enough to seat all the children, 7-8 sq. ft. for each. Class and work rooms 10-15 sq. ft. for each attendant.
6. Junior Young People's Div.:	9, 10, 11 yrs.	6-8 sq. ft. in assembly room. Class room 10-15 sq. ft.
7. Intermediate or Junior High	12, 13, 14 yrs.	8 sq. ft. in assembly room. Class rooms 10-12 sq. ft.
8. Senior	15-17 yrs.	6-8 sq. ft. in assembly room; 8-10 sq. ft. in class rooms.
9. Young People	18-23 yrs.	Same as for Seniors.
10. Adult Division:	24-above	6-10 sq. ft. for class room. Monthly assembly in the Church or fellowship hall. Young adult class in parlor.

Committees Should See For Themselves How Much Space Is Required.

To do this arrange equipment as it is desired to use it and then measure the floor space thereby being convinced as to the need rather than to turn to some schedule in a book. Space may be marked out on the floor of a hall borrowed for the purpose and the arrangement of equipment with pupils present marked out on the floor and the space measured.

Some very effective church school leaders suggest that a children's chapel will provide for certain types of assembly meetings for both the primary and junior departments, one of these groups using the children's chapel at the beginning of the church school period, and then going to their class rooms where they remain until the end of the session. Then the other department may assemble in the same chapel having occupied their own class rooms during the earlier part of the church school period. A "committee" may arrange the room for each assembly. The church chapel, when one is provided, likewise could be used for certain types of assembly meetings by the intermediate and senior departments meeting at different times. See discussions of the chapel in Chapter XIV.

Provide For All Needed Equipment

After the rooms required for the work of each departmental or class group have been listed, a general committee on the church school work should carefully scrutinize this list of requirements and make sure that lavatories, coat rooms, storage closets, built in book shelves, cabinets, and all such features are included and so designated that the architect will know where, in relation to other rooms in the church building, these facilities are to be located. We are making this chapter quite brief in view of the material set forth in Chapter XIX.

The active church is and must always be a very effective educational institution. Every individual church school building project is a separate problem by itself. Its program must be built up on the ground and with a knowledge of the goals of the individual church concerned. One must not expect to turn to a book of diagrams or list of standards to find the answers for any given building problem. The best we can do is to try to point out the areas of study to be pursued and the program to be assembled by the church and its consultants before asking any architect to discuss the building plans.

Trends To Be Noted By The Church School Builder

It would be well, for the entire congregation to achieve a speaking knowledge of modern Christian education. They should be aware of some of the definite trends in Christian education that have gone beyond the experimental stage and the activities and methods of church school work that have developed. All these trends and corresponding activities will help determine the kind of building to be designed and the equipment to be selected.

WHAT ARE THESE TRENDS?

1. The Church and Church School Have a Single Purpose,
as above noted.

2. The Church School as a Fellowship.

In the church school many approaches are used. At one time groups are engaged in study of the Bible, biography, hymns and other religious literature. Again, they learn and use the materials of worship. Some groups make Christian teaching more real for themselves and others through dramatizing their material. Because the Christian serves God through service to his fellow man, missionary projects and social service activities are developed in church school classes. Recreational groups help teachers to have a clearer understanding of their pupils, and bring out the personal needs of members of the school.

These different groups employ different kinds of rooms and equipment. A worship center may be set up in a classroom or a special chapel may be provided for use by many groups. Equipment for dramatics, a workshop for construction projects, a dark room for the camera club, a library for leadership education — these and other variations from the usual provision for church school classes help to make the program of the church more effective.

3. Pupil Activities of Learning.

An emphasis on pupil activity will not minimize the need for intensive study. Failure to get pupils to do homework for the church school has turned attention to the need for supervised activities of research, committee work and study within the school. The increasing length of the church school period is making it possible to devote a part of the time to this purpose. Investigation of problems under discussion will take pupils to the sources where information may be found. This creates a need for a usable church school library, for equipment in the classroom where source material may be kept, and for facilities which will provide the atmosphere in which studiousness will be the normal response of the pupil.

4. Visual and Audio Aids.

Visual education is a field of almost limitless opportunity. Certainly the church should keenly feel the responsibility of making available to growing persons such an effective, and delightful means of learning. The field is too great and the recent developments too extensive to do more than point out the importance in the school of a subcommittee on visual-audio education. Sources of materials and the kinds of equipment now found most satisfactory should be investigated. Perhaps one room should be equipped so that classes and departments could be taken to the room at certain times for lessons that will be illustrated. Provision should be made for still and moving pictures. The use of still pictures seems recently to have taken on new life.

In some churches the moving sound picture equipment will be installed in the fellowship hall. Other rooms should be equipped with outlets and window shades so that they may be darkened for a few minutes' use of lantern slides or films in the regular course of the work of the group. Wall space may be prepared so that it may readily serve as a screen and yet not obviously be a screen when pictures are not being shown. In a room where maps are provided a rolling screen similar to a window shade can be installed on the map rack.

5. Worship and Training in Worship.

There is a greater emphasis on well planned formal worship and also a development of the informal and guided spontaneous worship experiences in connection with learning and the fellowship activities. In the church school there will be occasions when definite provision must be made for worship. The leader will plan, possibly with a group, the time, place and procedure for worship. These developments may require a re-thinking of requirements for space and equipment.

6. Recreational and Fellowship Activities.

Fellowship experiences, such as are achieved in group games, pageantry, festivals and athletics, form important productive areas in religious education. Character building programs will include a place for social and recreational life. Such activities are included in the program of the church school not for mere amusement or as bait to attract new members, but because of the opportunity which they present for promoting physical welfare and developing fellowship, co-operation, self-control, honesty, fair-play, and other desirable habits of character. Good health has a vital relationship to religious experience.

7. Dramatization and Pageantry.

Dramatization has long been recognized as a method of good teaching. If it is to become a regular activity of the group, the room for that group must be so built and equipped as to make it possible. This is one of the reasons for requiring more square feet of floor space per pupil, and equipment which can readily be moved to clear a portion of the floor. If rooms are not of sufficient size, there should be a place provided to which classes may withdraw for dramatic expression.

This phase of activity includes the presentation of the more formal dramas and programs not simply for the education of the participants but for the inspiration and enjoyment of audiences which may attend such performances. A stage and other equipment which will make such activities possible are needed.

8. Modern Church School Rooms Are Used More Hours per Week.

In building committee and congregational meetings objections formerly were raised to "spending so much money for rooms that

are used for only **one hour a week.**" Even so, it was the most important hour in the lives of many persons. The modern program makes much greater use of the building than when just a Sunday School was held. One Primary department room in an active church is in use **one hundred and eighty-five hours** during the year. In a number of churches the Sunday session of the church school has been expanded to occupy two or more hours. This has been done particularly in the departments of the younger children up to and including the Junior department. Sometimes the Intermediate department is included in the expanded session.

The weekday religious educational movement during the school year and the vacation church school show steady development where churches provide the rooms needed for effective educational work. It is noticeable that improved physical equipment is always followed by greatly increased use, provided, of course, the church faces its task of Christian education conscientiously, and provides adequate leadership.

9. Larger Classes.

In those churches which can provide larger class rooms there is a noticeable trend toward larger class groups within an age range. Boys and girls are placed in the same class. This plan is favored by many because of the necessity of having well trained teachers in the church. This means fewer teachers to be enlisted and trained. Assistant teachers who need to be well trained help in the visitation and other work in the class.

10. Boys and Girls Grouped Together.

More normal work is possible when boys and girls are grouped together in classes. They are accustomed to being together in the public school, in the home and in other groups. It has now widely been demonstrated that boys and girls may be in the same class group in the church school. Of course, now and then it will be desirable to have a group of boys and girls to work separately on some project or interest.

FURNISHINGS AND EQUIPMENT

The forethought and care requisite to the successful planning of the building are no less necessary in the selection of its furnishings and equipment. The best buildings may be disfigured and made to appear cheap and tawdry by unsuitable furniture.

It is poor economy and unwise planning which permits an outlay of thousands of dollars in a building to be crippled in effectiveness or in its inspirational tone and beauty for the sake of saving a few hundred dollars in equipment and furniture.

The task of the architect and the building committee is not completed until proper equipment has been installed in the rooms.

THE EQUIPMENT COMMITTEE

A standing committee on equipment and furnishings should be a part of every local church organization. The first task of this committee is to study. There are excellent books on furniture. These will be read with interest. Sample pieces of equipment will be tested in use. A list of needed equipment, its quality, sizes and finish will be prepared with the aid of the architect. This list and specifications may be used to secure competitive bids from manufacturers. Each item of equipment must be selected for its definite purpose.

In character the equipment and furnishings should be worthy of the cause to which they are dedicated. Equipment should not be showy or ornate; it need not be elegant or luxurious, but it must be good. It should not be easily marred or defaced. Some of it will receive severe usage and, so far as possible, all of it should be designed like the building, to last indefinitely; but long service should leave its mark in mellow tones, not in scratches, splinters, discolorations and breakage. Refinement, sincerity, genuineness should be reflected.

CHARACTER IN FURNITURE

In selecting furniture, particularly the more stable sorts suitable for churches, there are minor points quite apart from the dimensions and general design, which, like the tailoring of a suit of clothes, disclose its quality and collectively give it tone and character. Among these points is its mechanical construction. Durability is not a matter of weight or massiveness or great strength of some parts, but of that care and reliability of construction which insures that there is no particularly weak part or joint. The craftsmanship and responsibility of the maker are the best assurance in matters of construction.

Care and thoroughness in the rounding of corners and edges are not only an evidence of high grade construction but are essential to comfort and good posture. A sharp line of contact under the thighs or across the back both indicates shabby workmanship and foretells restless discomfort for the user. Sharp corners on

legs and rungs cost much less to make than carefully rounded and sanded edges, and they look cheap; they are not pleasant to strike against; and in use they splinter with disastrous effects on clothing. Curves cost money and always represent more planning and labor than do the square sawed sticks and boards, but the human anatomy is bounded by curves and straight lines cannot fit it.

Much of the labor of making good furniture goes into the smoothing operations, particularly on curved surfaces, which are necessary to bring out the beauty of grain and to secure a refined and finished appearance. Fine surfaces cannot be made with paint or varnish; they must be made on the wood itself, and they cannot be made on inferior wood. Painted surfaces are superficial and shriek of shallowness whenever scratched. Thick, shiny varnish over a poorly selected or finished wood is even more offensive to good taste and a love of genuineness. It is very likely to become sticky and to injure clothing, and it easily gets discolored and disintegrates under the influence of heat, moisture, perspiration, or usage.

In a chair suited for school use as distinguished from lounging, the size and design should be such that the most wholesome, alert, and attentive posture of the occupant is at the same time the most comfortable and least fatiguing. This is the case when, with the muscles completely relaxed, the body weight is poised about the erect spine and is carried on the seat bones while the weight of the legs is carried by the feet resting on the floor.

PROPER BACK AND SEAT FORMS

An essential condition of comfortable sitting in an erect position is well-shaped support in the small or hollow of the back, which is the level of the lumbar vertebrae at and just above the height of the top of the hips. With this support, if one sits well back against it and relaxes completely, the pelvic frame is kept in a vertical position, the weight is balanced about the spine, the shoulders fall back and down of their own accord, the chest is expanded and deep breathing assured, and all the vital organs have full space for functioning freely and vigorously. Without this support in the small of the back one inevitably tilts the pelvic frame backward and bends at the waist, shoulders hang forward, chest is flattened, and all the vital organs are more or less compressed and restricted; all of which reduces vigor, engenders lassitude and makes energetic attention difficult. **No chair back which is built in a straight line from the seat to top can possibly give the sort of support which makes for erect posture.** While there should be shoulder support when one leans back, the essential support is a well-rounded form which fits the back between the hips and shoulder blades.



Comfortable, joyful, cooperative learning.

(First Methodist Church, Oak Park, Ill.)

But however good the back support, it is futile if the seat is so long, from front to back, that one cannot get near enough to the back to use it effectively, or if there is an elevation at the rear of the seat or the seat is so flat that one slides forward by the force of gravity. A good seat has a pronounced backward slope, is shaped to carry the body weight wholly on the ischia and thick part of the thigh muscles, and is short with a well rounded front edge. In such a seat erectness is the most natural and comfortable posture.

SEAT HEIGHT

A first essential to this posture is that the seat shall be low enough for the feet to rest on the floor without any pressure from the seat under the knees. The least such pressure quite definitely tends to restlessness, and bad posture. On the other hand, if it is well formed and sloped, there may be an inch or two between the highest part of the seat and the leg behind the knees without the least discomfort or disadvantage. We should, therefore, **make sure that the seats are low enough.**

In any considerable group there will be a few who might well take larger chairs but there is no advantage in their so doing. Most wood chairs for adults are made in the traditional eighteen inch height, which is too high for the comfort of most women and a large percentage of men. Since it is quite impossible to keep

twenty - five loose chairs of assorted sizes properly distributed among a similar assortment of children, it is better to keep in mind that high seats are always bad but low ones, if properly formed, are safe, and to have but one height of a chair in a room; or, if the variations of pupil size are great, two sizes differing by not less than two inches. Too great a variation of the size of chairs within any one room is not advisable.

PORTABLE SEATING

There are innumerable folding chairs on the market and "portable chairs," which are the same thing combined in units of two to five individual seats. Some of these are very cheap and most of them are noisy and extremely uncomfortable. The frightful cost to the nation in loss of religious zeal and interest due to cheap, flat-folding chairs can never be calculated. When the average adult spends most of his life in cushioned swivel chairs, overstuffed home furniture, or luxurious theatre or automobile seats, it is not to be expected that he can readily adapt himself to quiet concentration and contemplation in these ill-shaped torture seats.

There are a number of very comfortable and satisfactory lines both of the individual folding chairs and portable group units. Some of them are well finished and attractive in design and are comfortably upholstered. The best of them have practically eliminated squeaks and noises while in use and reduce the probability of breakage to the minimum. If carefully selected, they may be recommended for those rooms which require compact seating, in which the chairs must be quickly set up and readily stored away in the least possible space. A flat folding bench, correctly designed and proportioned, comparable to a pew when opened and to a couple of flat boards when closed, would be a useful contribution to church school equipment, particularly for the recreational auditorium. Folding chairs should not be used except where necessary and only as many as necessary, never in the children's division.

TABLES

Tables have an important place in the equipment of church schools. The essentials of a good table are that it should have an attractively smooth finished top, with no drawers, stretchers or other structural parts under the top in way of pupils' knees and thighs, with legs set as far as practicable out of the way, and with all parts which can come into contact with the pupils' hands and legs well rounded, so finished that they do not become splintered.

If it is necessary to provide some storage space for books or supplies at the table a shallow shelf set well under from the edge and not more than about three inches deep may be provided, though any obstruction under the table top may be in the way.

The table top should be approximately ten inches higher than the chair seat in all grades, being twenty inches high in the kindergarten and not more than about twenty-eight inches for adults. This is the best average height for writing purposes though the correct measure for individuals in all grades will vary.

The table and chair arrangement should permit variation in the work. Pupils may work at a table or away from the table as the case may require and almost the entire floor area may be cleared at a moment's notice by pushing the table against the wall.

The oblong table will probably be found most satisfactory. Small rectangular tables permit easy rearrangement of furniture and great flexibility of use. Round tables are wasteful of floor space, cannot be arranged with reference to the windows so that a majority shall not have bad lighting conditions, cannot be combined to provide for flexibility in the size of table groups, are either limited to a small sized group or else have a large useless and inaccessible central area, are unwieldy, difficult to handle, and are relatively more expensive.

In the old type of Sunday school organization in which many classes were crowded into a single noisy room, it was necessary for teacher and pupils to go into a huddle with heads as close together as possible in order to communicate with each other. For this sort of class there was developed a type of table with a recess cut into one side in which the teacher sat with six or eight pupils as close to her as it was possible for them to get. This more or less "kidney-shaped" table has no rational place in the equipment of a school of the modern sort.

TEACHER'S TABLE

A teacher's table of light and readily movable sort is necessary in every classroom. It should be of a material and design in harmony with the pupils' equipment approximately two by three or four feet in surface area and twenty-nine inches high. Some leaders prefer a lower and smaller teacher's table for groups of small children—one of which is about eye level for the children when seated. There should be an open shelf underneath for convenience during the class period but no drawers, cabinets or other storage facilities built into the table. These light tables are superior in many respects to the cumbersome teacher's desk of the office desk type.

The reader is referred to the book, *Building and Equipment for Christian Education* (54 pages, illustrated, 50c., Bureau of Architecture) for a more detailed description of furnishings and equipment for the church school.

We find some differences of opinion among church school workers regarding these important items. Some are again asking for round tables. In the changing, moving work of education one must expect differences of opinion and experiences. Sometimes you must let your conscience be your guide.



Someday, the ideal Children's room will be built.

The author is constantly seeking photographs of commendable rooms in church buildings.

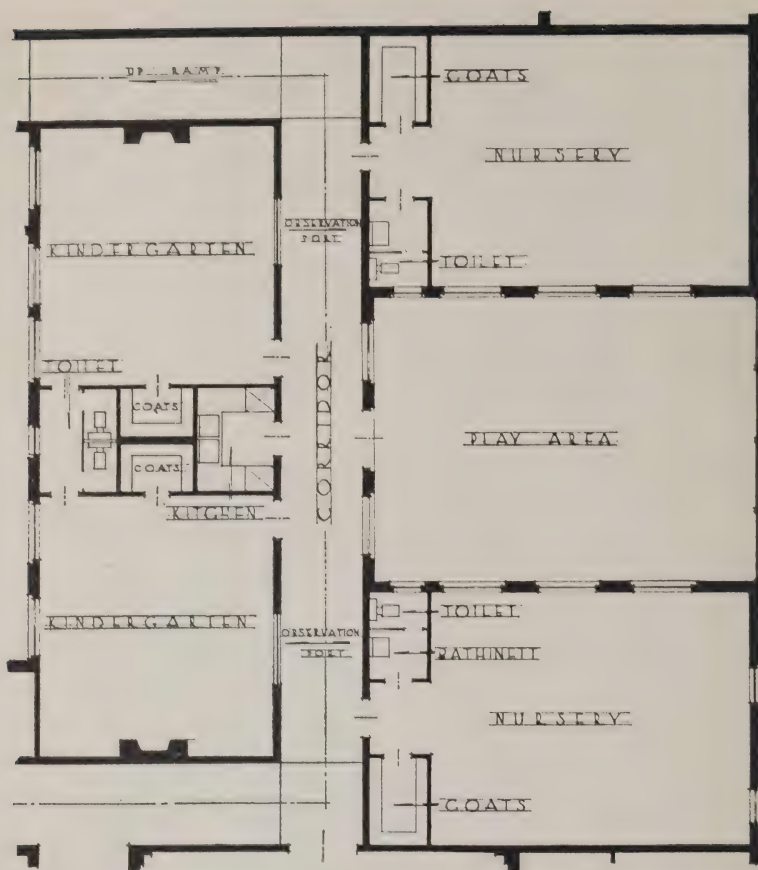
Several faults may be found in these Children's rooms, but at least, attempts were made to provide more suitably for teachers and pupils.



A Youth Parlor

H. WAGONER, DESIGNER

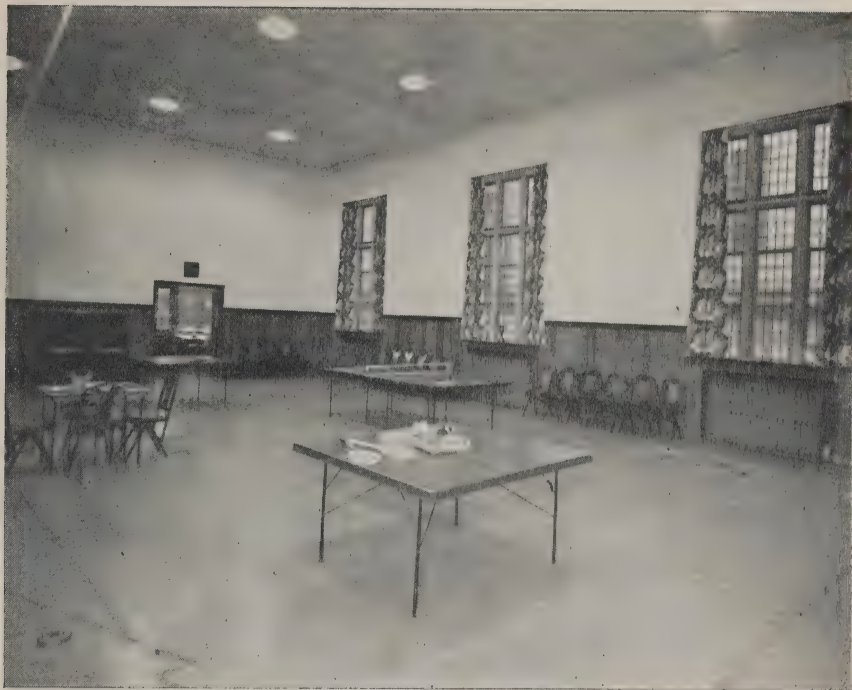
Next to the Christian family, the church should be the most precious fellowship in human relations.



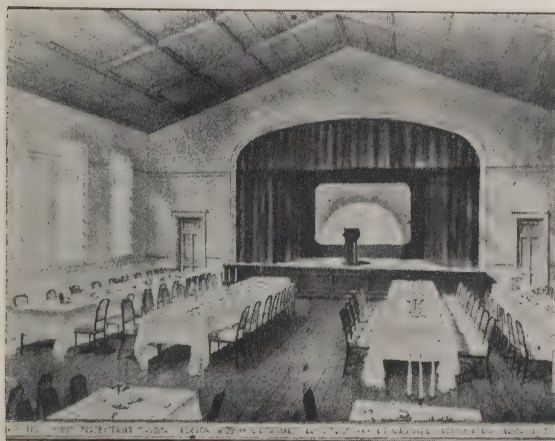
Nursery and Kindergarten rooms in plans for
Munsey Memorial Methodist Church, Johnson City, Tenn.

This church with a successful nursery school in the present old building is planning for a weekday kindergarten and nursery school in their new building now being planned (1947).

A slow study of the plan will reveal the facilities needed in the rapidly growing movement for weekday schools in Protestant churches. Abernethy, Architect; Fink, Consulting Architect; E. M. Conover, Consultant.



Recreation room, Trinity Methodist Church, Youngstown, Ohio. Lights flush in ceiling, recessed radiators, removable screens for windows, ceiling height of 18ft make the room available for many kinds of activity.



Sketch of fellowship hall, Highland Presbyterian Church, Fayetteville, N. C.

H. Wagoner, Designer

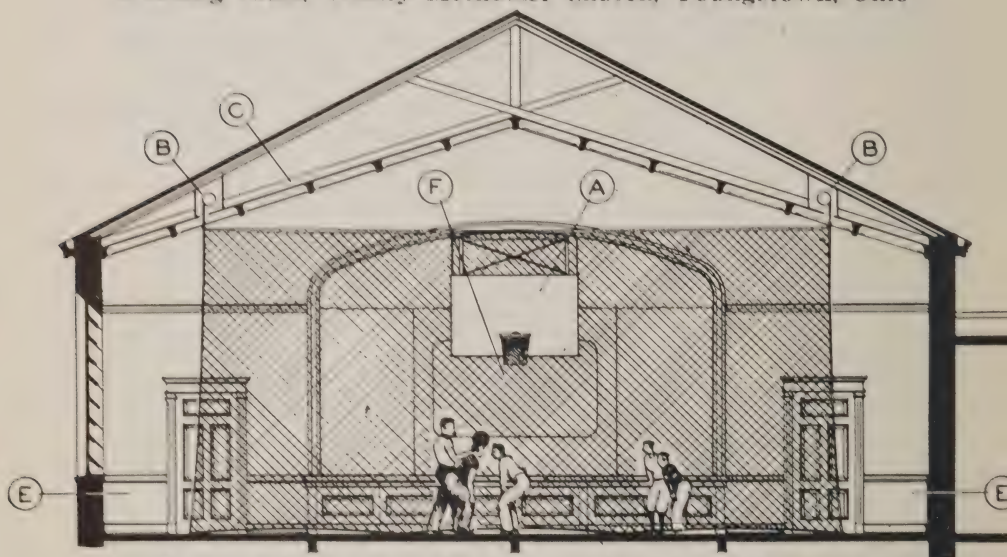
Entire room may be protected by roll down nets, and made available for athletic programs when needed. The folding chair shown is expensive but helps give character to the room. Storage space under stage. Accoustical ceiling.

The fellowship hall with stage and kitchen is needed by every church. It should never be in a basement.



DESIGNED BY A. H. FINK

Reading room, Trinity Methodist Church, Youngstown, Ohio



You may have a completely suitable Fellowship Hall and in the same room provide for a broad program of character-building activities.

A Backboard and Basket hinged to remain out of sight behind proscenium arch when not in use.

B Rollers and Pocket for nets. C Roof and truss. E Spectators' space.

Thomas and Wagoner, Archts.

XVI THE HOUSE OF FELLOWSHIP

In chapter XV we already hinted at the importance of recreational activities as a definite part of the program of Christian Education in the local church.

The church cannot perform to the desired degree of success its work in character building and religious culture apart from a well developed recreational and social program. The church cannot resign to non-church agencies a ministry so vital to religious living and growth. The recreational work of the church is not to be planned merely for filling in time. The needed recreational program must be integrated into the total religious ministries of worship, religious education and service.

The classes and other groups and their leaders plan and lead in the recreational work. Such essential elements in character as complete honesty of action, fair play, co-operation, teamwork and other excellencies of personality, can most effectively be taught and experienced in recreational work as conducted by religious leadership.

The possibility of increased leisure time in the future in our modern civilization will intensify the importance of church-directed recreational work.

The church can help folks to avoid the mire of frustration and irritation, the inner rebellion, and disloyalty such as may break down a personality through creating the means of a more abundant living through broad programs of recreation.

Through this the church can help keep daily living free of hampering attitudes and actions and make daily life reach challenging adventures and become deep and satisfying. The church must help fill the life of the person who lives in a busy, noisy world, with satisfying activity, with chances to do one's best and to be one's deepest self, to realize one's best self with the comradeship, cooperation and sharing of the activities included in church directed recreation, which includes creative experiences in dramatics, music, pageantry, crafts and arts.

The Needs

The small church needs a fellowship hall with a minimum unobstructed floor area of 30x50 feet, an average ceiling height of 14 feet, with a stage and kitchen. In such a room, which we do not call a gymnasium, a great variety of group games, athletics if desired, motion and still pictures, pageantry and dramatics and fellowship suppers, may be accommodated.

Larger churches will need a larger fellowship hall. Churches in thickly settled communities where play space is limited may need a gymnasium. The presence in the community of a gymna-

sium for match games may indicate the need of a church gym for practice games besides the many other occasions an active church will use it. Even in the average size church a combination hall with stage and gymnasium **besides** the dining hall, is often needed. Equipment, however, such as bars, rings, etc., is not now in demand. Rollerskating is quite popular in many places. If there is only one hall in a church that is alive there may be many conflicts in the needed programs.

With the use of modern building materials a very beautiful recreational hall can be constructed of materials that are colorful, that have sound absorbing qualities, and that also are very durable. Ornamental metal grills can be placed inside the windows for protection when the room is used for certain types of athletics; when opened, the grills are ornamental. Or windows may so be constructed that they will not be damaged by basketball or other equipment. A very practicable plan for a recreational unit may be described somewhat as follows: —

A two story unit, the ground floor to be not more than 4 feet below grade with ceiling height of 9 feet. This means that one climbs 6 feet of steps to reach the main floor. On the lower floor have bowling alleys, rooms for floor and table games, lavatories, hobby shops, boys and girls club rooms and adult class rooms if their is sufficient space.

On the main floor have the general purpose fellowship hall with stage and kitchen. The stairway leads from the stage to the lower floor where some of the rooms will be available as dressing rooms. Don't put tiny little dressing rooms at either end of the stage. Do not have partitions at the ends of the stage.

The ceiling of such a room can be rather high because the roof structure forms the ceiling line.

Bowling alleys wherever installed, are very greatly used by all age groups and both men and women. Rooms are usually needed for floor and table games. Several of these rooms are used by adult classes on Sunday.

A church parlor type room is very important. It should be provided with a kitchenette unless the kitchen is located between the hall and parlor. By all means, have a fireplace even in the very smallest church. Nothing can equal a fireplace as a center for discussion groups or just good fellowship.

A "drop in" room, open, with a sensible sponsor present, may be very useful, much nicer than the drug store for "chat parties." But let's never call anything in the church a "bar"—milk bar, or other bar. We do not need to borrow terms with vulgar associations.

Many excellent recreational programs are to be conducted in the out-of-doors. Playgrounds, outdoor fireplaces and equipment for outdoor work are very important.

Swimming is an increasingly popular form of recreation. In one institutional church in a crowded city section, the total attendance in the swimming pool in one week was 1400. We need further experience on the part of churches before we can give any general information regarding the use of swimming pools in churches. Other institutions that furnish social and recreational opportunities seem to make much of swimming and one wonders why a greater number of churches have not ventured into this field. Surely a lot of church money has helped to build pools in country clubs, YMCA's and lodge buildings.



SUNDT, WENNER, FINK AND THOMAS ARCHTS.

Chapel, First Methodist Church (Germantown) Philadelphia, Pa.

XVII THE CHURCH, A CENTER OF CHRISTIAN SERVICE

Buildings For Special Needs.

In some sections, particularly in congested centers, there is a need for church plants in which service and educational activities require a large proportion of the space. Such facilities as rooms for clinics, boys' and girls' club rooms, library, assembly halls, class rooms, parlor with fireplace, domestic science department, gymnasium, music rooms, and living quarters for workers may be required. Churchly ideals should control the design of the entire plant. The sanctuary or chapel should be well designed for purposes of public, group and private worship and in no circumstances should the chapel or worship room seem to be hidden or made of minor importance even though it may occupy a small part of the total volume of the building.

As in all cases of church planning, let the needs of the community for religious service control the program of rooms and facilities to be provided. Visits to other institutional churches may offer suggestions. The program depending upon the needs, is likely in each case to be different from every other. Institutional churches need ample storage facilities and this feature will facilitate the matter of using several rooms interchangeably for various activities. There is often a need for "quiet" rooms for reading where folks including boys and girls, can just be quiet and look at pictures or read.

The week day nursery and week day kindergarten are very important in some institutional churches. There must be provision for displays of children's work and sufficient space for various recreational and other group activities. Careful attention should be given to interior decoration and lighting. Too many so-called institutional churches have been dark and dreary places, totally unrepresentative of the Christian faith. Modern building materials such as tile in different colors make it possible for buildings that receive very hard usage to be attractive.

The larger recreation hall should have an adequate stage.

Income Producing Plants.

In the present tremendous program of new church planning representing in 1946 a value of more than 650 million dollars for new Protestant church buildings and improvements in the United States we have yet to hear of a church proposing to erect a business block or hotel, hiding away in it church facilities and expecting the income from the plant to pay the way of the church. The many financial tragedies that accompanied such projects in former years should be sufficient warning to any church tempted to enter the world of competitive business. Again we say, "let the church be the church" and not enter into competitive business requiring expert management which too seldom the church will engage. If the church will invest the funds that an income produc-

ing building will cost, at 3% interest for an endowment, they will be much better off than to engage in a real estate or hotel business. The writer after an observation of church work for 25 years can under no know circumstances recommend that any church embark upon an income producing building program.

Student Centers

Several denominational buildings are being planned near college and university campuses to provide a social-religious center, usually where the denomination does not have a church building near the campus. Rooms for social gatherings, a lounge, pastors' music room, conference room, living quarters for student workers or others, game rooms are usually needed. A Chapel should always be provided.

The writer has received many requests for suggestions for student center buildings. As in every other situation, the needs of the program determine the plans of the building.

Great care must be given to exterior and interior design.



WENNER & FINK ARCHITECTS

Remodeled Interior, St. Paul's Methodist Church, Newport, R. I.

XVIII THE ROOMS REQUIRED FOR ADMINISTRATION AND PASTORAL WORK IN THE CHURCH BUILDING

The General Church Office.

The church office should be located as conveniently to the principal week day entrance as possible. A window with counter may make it possible to control the entrance to the building. Other details regarding the church office will be found in Chapter XIX in connection with the building program.

Increasingly, churches are employing full time financial secretaries. Such a helper should have a small office where he will be protected from interruptions. It might conveniently be adjacent to the main church office.

The Pastor's Conference Room.

A very essential room in the church building today is the pastor's room for study and for conference with persons in need of counseling regarding personal problems, and family or other problems. The modern pastor is trained to deal with all human problems, in fact, to do the whole work of a pastor. Physicians may send patients in need of pastoral care to certain pastors who are capable of rendering the needed service. The room for counseling must be large enough to give the visitor a feeling of confidence that the purpose of the conference will be achieved. It must give an impression of encouragement, cheer and dignity. Pictures must be chosen with extreme care. Sometimes as many as four people will be present at one conference. The room must not give the feeling of being too crowded. A room should be provided with an ample clothes closet, book-shelves and lavatory. A fireplace will be a very effective piece of equipment for this room.

Besides the pastor's counseling room, which should be provided even in the smallest church, the pastor may need in his home or in the church building, a room for undisturbed study and meditation. The pastor at one church climbs a ladder to reach a very fine room high in the church tower, where he can go for undisturbed work. Rooms should be provided as needed for other members of the staff. We simply must realize that the church of today is an institution of tremendous importance. Hundreds of people, even in the church of average size may enter the building for various services and ministries during a week. The rooms provided for the staff members must not be too small. Space must be provided for built in book shelves and closets.

There is quite a trend to place the pastor's conference room on a second floor in a location that is readily accessible and yet a degree of protection is given. When located just off the main church office or on the main floor interruptions and noise of traffic and work in the building is too distracting.

If a minister of music is maintained he will frequently use the choir rehearsal room as his office and for giving individual and class instruction during the week. Sometimes, as a church grows and increases its staff, rooms at first used for church school classes, may later be assigned for staff use. It would be well for these rooms to be planned in advance so that this will be possible and book shelves and other equipment can be installed later.

The administration of an institution like a church with as many members as some colleges or universities, require adequate staffing, and consequently adequate rooms and equipment for efficient administration and personal services. At least one church now employs a psychiatrist as a full time member of the pastoral staff.



A Chapel type of Church School
Assembly Room.

XIX THE BUILDING PROGRAM

After the population studies have been completed and an estimate made of the various age groups in the potential constituency of the church, a statement of religious educational organization desired, the program for recreational and social activities has been assembled, and it has been decided whether to have a chapel and what groups shall use it and all the other items that may affect the planning of a building then the building program may be written.

It is not for the architect to decide any of these items. The policy and program of the church is to be determined by the church itself with the aid of such consulting service as the church may secure.

The executive committee of the Building Council may write the statement of needs based on the reports and recommendations of the several committees suggested in Chapter VI.

The building program outlined which follows was assembled by one church after the several committees and sub-committees had spent two years in studying their field and assembling their statement of proposed church work and the requirements for housing it.

The following list of requirements seemed to fit this situation but of course every building problem is a separate and individual one.

THE BUILDING PROGRAM FOR ST. JOHN'S CHURCH

To be located on the plot described by the accompanying plot plan and subsoil survey.

The architect's first over-all plan or master outline plan is to show the following facilities without limitation as to the possible cost of the building and without special attention to the exterior design.

The volume of cubic feet included in the plan calculated from the top of the footings is to be estimated. Use the A. I. A. plan chart for calculating cubage. The architect is to report, in so far as he may be able to estimate, the apparent cost and material situation as it may possibly be six months from the time his first plans are presented. He should also record any special foundation costs that may be anticipated in addition to the average cubic foot cost.

When the church gives its instructions for revised preliminary plans, the probable amount to be expended must at the time be stated to the architect. This must be itemized as to general contract cost, allowance for glass, built in furnishings such as pews and chancel furnishings, etc. Architects' fees are to be included in the general contract cost. To help him familiarize himself with the requirements, the architect may note that the following manuals and books had been studied during the process of assembling the statement of needs. He may wish to refer to these authorities and to others of his own choice; Building and Equipment for Christian Education; Building for Worship; Planning Church Buildings; The Church and Recreation. Leaflet literature supplied by the Consultant.

With the second set of revised outline plans the architect will bring recommendations regarding equipment such as heating, air conditioning, ventilation, interior decoration, and the available information regarding costs of these facilities.

As to the exterior design, the congregation desires the building to appear churchly, distinctive, attractive, without ostentation. It need not necessarily follow slavishly any traditional style of architecture but must instantly be recognizable as a church.

After complete estimates of cost have been presented, following the second presentation of outline plans, the church agrees that the architect will be given definite instructions in view of the amount of money that is likely to be available for the building and its equipment and furnishings or for any unit part to be erected.

There is to be no basement under the nave; the chancel is to be located at the end of the nave opposite the church school and social rooms, with a central entrance to the entire plant on the St. John's Avenue side of the plot.

In keeping with the city ordinance parking space for 100 cars must be provided on the property.

The architect is to nominate a landscape architect; the church agrees to provide in addition to the architect's fee the sum of \$500 to compensate the landscape architect for his counsel and plans, his work to be done under the direction of the architect.

ROOMS REQUIRED FOR CHURCH SCHOOL WORK.

I—Children's Division:

1. A nursery for children under $1\frac{1}{2}$ years, 250 square feet for ten children and attendant.
2. A nursery room for "toddlers", $1\frac{1}{2}$ to about $2\frac{1}{2}$ years in age, about 300 square feet for 15 children and two attendants.

3. A nursery class room for $2\frac{1}{2}$ years and 3 years of age, 400 square feet for 20 children and two attendants.

4. A lavatory with juvenile size fixtures to be adjacent to the above rooms.

5. A class room for four year old children about 320 square feet for 16 children and one teacher.

6. Class room for 5 year old children, 360 square feet for 16 to 18 children and two teachers.

7. A lavatory with juvenile size fixtures to be easily accessible to all the above rooms.

8. Hot and cold water to be available and bathinette for the use of those in the first two rooms. Coat hanging space to be immediately adjacent to the rooms where attendants can help the children with wraps.

9. Ceilings to be 8 feet in height, liberal amount of clear glass in windows with small colorful "incidentals" inserted. Decorations to be cheerful, quietening. Storage closet with shelves for each of the above rooms. Tack boards and picture rails with groove in the rooms for 4 and 5 year old children. Tack boards to extend two feet above the picture rail which is to form the base of the tack board, center of tack board to be at average eye level of the child. Closet space with low shelves for light rugs to be spread on floor when needed.

Final details to be supplied by committee on religious education of children through the executive committee member who is instructed to communicate all instructions to the architect in writing.

10. Plan six class rooms for children 6, 7, 8, 9 10 and 11 years of age, these to vary in size, allowing about 12 square feet per person for from 15 to 18 pupils and one teacher in each room.

11. Provide coat room space for above group of six rooms; boys and girls lavatories within easy reach but not necessarily adjacent to this group of rooms.

12. A built-in blackboard, about 3 by 4 feet in size, of selected color in each of the above six rooms, shutters to be used as tack boards provided for each blackboard.

13. A closet in each room for teacher's wraps and supplies.

14. Clear glass windows with small colored incidentals in each opening.

15. Provide a junior chapel, seating capacity 60 children besides space for 12 in a choir.

16. Provide for a worship center; leader's desk at one side of the platform.

17. Windows of tinted glass in junior chapel with a medallion in each; program of glass to be supplied by committee of teachers.

18. Provide for showing of sound pictures in this room. (This room will be used twice each Sunday by two or three grades grouped together and occasionally by single grades according to schedule.) (Portable blackboard).

19. Plan three class rooms, one each for the young people 12, 13 and 14 years of age. The work will be planned, however, for pupils of the public school grades usually corresponding to these ages. Provide in these rooms 10 square feet per person and for 16 to 18 pupils and one teacher each. Small individual tables to be used and the teacher's desk. Blackboard and window treatment as indicated for the group immediately preceding. These groups will assemble singly or two grades together as occasion may require in the church chapel and for weekday activities the church parlor, the youth room and the fellowship hall and game rooms will be available for these groups.

20. Provide a youth room, 500 square feet with fireplace at one end and worship center at the other. Kitchenette adjacent, built in bookcases. Closet. This room to be scheduled at Sunday school period for assembly for seniors, 15, 16, and 17 years old and also at another period for young people's assembly when required.

21. Provide five class rooms varying in size from 100 to 120 square feet each to be available for senior and youth groups taking elective courses. (Tablet arm chairs to be used.) Maybe on second floor.

22. PROVISIONS FOR ADULT CHRISTIAN EDUCATION

Fellowship hall to be used by largest adult group, church parlor and boys' and girls' club rooms and the room for floor and table games to be assigned to adult groups. The choir is to be organized as a class in the religious arts, the choir room to be used for this group. In addition, have three adult class rooms, about 210 square feet each for an attendance of about 30 each. One of these on main floor. For further details as to church school building, see the book "Building and Equipment for Christian Education" (The Interdenominational Bureau of Architecture).

23. THE SANCTUARY

Provide in the nave 300 sittings allowing 20 inches each, one

center aisle, two side aisles. Provide in the chancel for a choir of 40 seats. The nave is to be used for two services on Sunday morning. Provide communicants' railing. For further details regarding the nave and auxiliary rooms to the nave see booklet "Building for Worship" published by the Interdenominational Bureau of Architecture. Note pictures on pages 3, 9, 13 and 51.

24. In addition to the above indicated junior chapel provide a church chapel seating 60 persons, choir seats for 8, communion table and lectern. Have an alcove for seating the family for funeral services, same room shut off by panels to be used as bride's room for weddings. Have means of traffic from this room to the narthex of the chapel without going through the chapel. The chapel to be easily accessible from the sidewalk on the St. John's Street side of the plant and also easily accessible to church parlor.

25. The chapel is not to be assigned to any church school class but will be available for use by various groups particularly those of high school and junior high age. **Note**—the chapel will need to be heated throughout the day time at all times and usually in the evenings to be comfortable for private meditation and prayer. The Junior chapel to be heated on Saturdays and at other times as scheduled.

26. FOR FELLOWSHIP AND RECREATION

Provide general purpose fellowship hall with an unobstructed floor area 40x70 feet. Have stage with as wide a proscenium opening as possible; no partitions at the ends of the stage; depth of the stage, 20 feet. Straight front; no foot lights. Trap door 24x72 feet in floor of stage.

Ceiling height of the fellowship hall to be 18 feet.

27. Kitchen with serving room space and counter between the hall and the kitchen working space. Place kitchen at end of the hall opposite the stage, 9 foot ceiling in the kitchen with room above which may be the youth parlor above mentioned with removable panels so that this room may be used for overflow for fellowship hall audiences and also for placing moving picture equipment.

28. The church parlor; 800 square feet of floor space, fireplace to be constructed of rocks to be gathered by boys and girls of the church; kitchenette available unless the parlor can conveniently be located adjacent to the main church kitchen. Built in book shelves. This room to do double duty as a church library.

29. Install three bowling alleys. Provide a room large enough for two ping pong tables and two shuffleboard courts. The ceiling may be 9 or 10 feet high. This room doing double duty as an adult class rooms and small dining room.

30. Provide boys' club meeting room with 4 built in storage closets equipped with drawers and shelves, floor space of room 500 square feet; of closets 20 square feet. Some class rooms may be used as troop cabins, main boys' room to be available for youth or adult class on Sundays.

31. Have fireplace built of rocks to be gathered by the boys.

32. **Note**, above indicated youth room (20) to do double duty for girls' club work. Built in closets for these groups as requested by the recreational committee.

33. **Note**, the recreational unit of the plant may be a two story unit with the ground floor excavated 4 feet below grade and on this lower floor, bowling alleys, game rooms, club room and very liberal provision for lavatories and storage; the fellowship hall on the main floor. 9 foot ceiling for the lower floor. See suggestive sketches provided from other churches by the church building consultant.

34. Provide refreshment booth, easily accessible to the above suggested game rooms and also accessible to the fellowship hall.

35. ADMINISTRATION.

General church office for church secretary; space for desks for financial secretary, for church school superintendent and secretary. A counter between the working space and the public space.

36. A work room adjacent for filing cabinets, shelves for supplies, addressograph equipment and mimeograph.

37. Fireproof vault in the basement story.

38. On the second floor provide pastor's conference room with fireplace, lavatory, clothes closet, built-in-book shelves, minimum clear floor area 240 square feet.

39. Study for minister of education. Closet, bookshelves. Minimum floor area 120-160 square feet.

40. Provide another similar room for possible future addition to staff.

41. THE CHOIR

The choir assembly room to be used also as studio for the minister of music.

42. Men's and women's robing rooms, opening off the choir room. Choir room to have minimum clear floor space of 480 square feet for assembly of 40 persons. Ceiling to be treated acoustically so that choir may sing at full volume. Room to be located so the choir can enter the nave at the end of the center aisle.

43. Also have boys robing room and girls robing room for children's choir, or space for additional cabinets. Provide space for hanging robes for a total of 40 men and boys and 40 women and girls.

44. Give very special attention to treatment of the narthex which is the central lobby for the entire plant, as well as being a common visiting area after the main church services. Protect the church school rooms from this narthex. However, the main church parlor above noted may open off the narthex.

45. Provide adequate coat hanging space for those who attend church in the nave and who use the chapels as well as for all in the church school rooms and fellowship hall.

46. Have lavatory and coat hanging space beneath the narthex with easy stairways.

47. A moderate appropriation will be provided for stained glass windows in the sanctuary and chapels. It may be necessary to use a tinted glass temporarily for some of these window openings when the building is erected. Rose windows in the chancels of both nave and chapel to cost about \$25.00 per square foot have been provided for. Clear glass windows throughout the entire building with carefully designed incidentals and color in church school and other rooms. If convenient, have French doors in some of the children's rooms to open out upon grass and flower plots. All windows of children's rooms to be below eye level of the child. Decorative metal grills inside the windows of the fellowship hall, these to be closed when the room is used for athletics.

48. Provide a net to be rolled down across the front of the stage.

49. Show samples of colorful tiles, with acoustical value for interior of corridors, fellowship hall and other rooms.

50. Floorings—Ashphalt tile to cover all basement floors. Provide samples of colorful, quiet and resilient floor coverings for other rooms. Show illustrations of inlaid features for floor games etc. Carpet, however, to be used in church parlor and chapel and possibly in other parts of the building.

51. Entrances—The main entrance to the plant shall be entered at the narthex by climbing only one step not more than 6 inches high. At one side of the step a ramp for use of wheelchairs.

52. For many details regarding the various parts of the building, including suggestions for organ, for stage, etc., refer to data in books and leaflets supplied by the consultant.

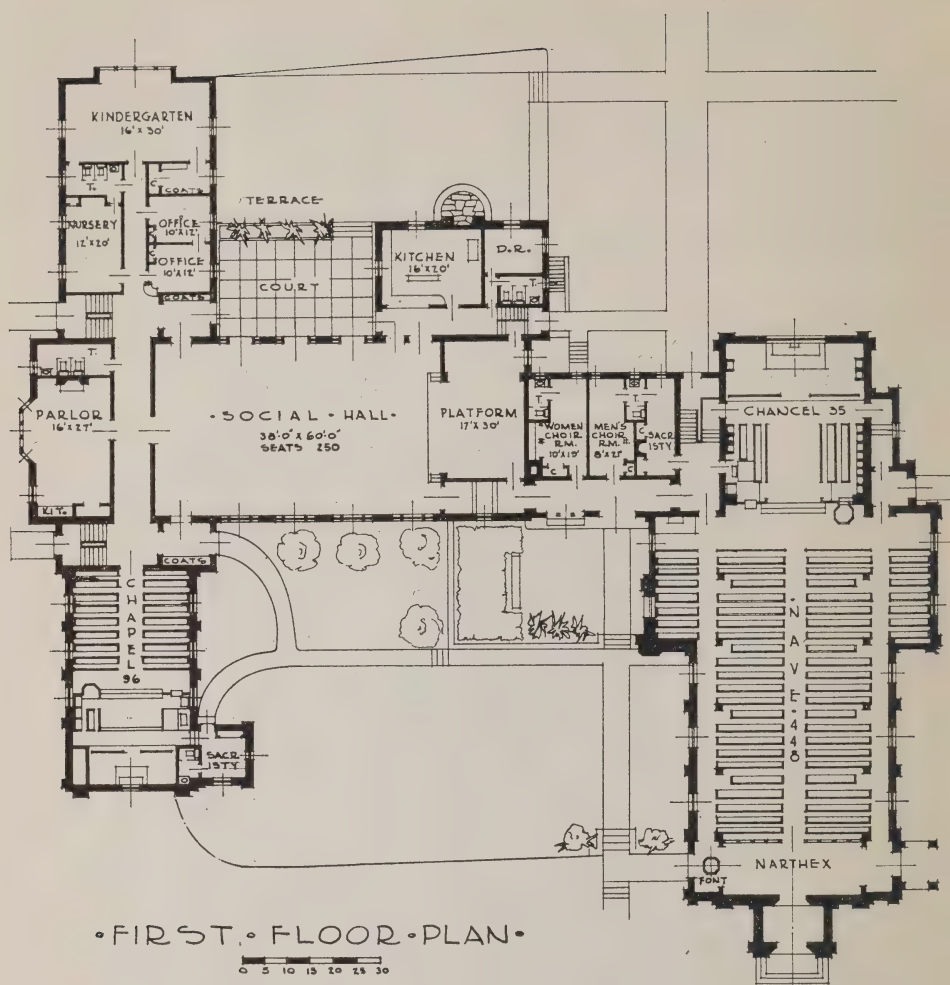
53. Mechanical equipment—to be recommended by architect and his engineer (including some type air conditioning or air cooling).

54. Color scheme for entire building to be offered by architect.

55. Organ—A pipe organ will be installed—see statement of organ builder as to space required, composition of walls, of chambers, etc.



University Christian Church
Champaign, Ill.
Wickes, Architect



A FLOOR PLAN

Taken from a set of preliminary outline plans for a Protestant Episcopal Church in a new residential district. Wenner and Fink Philadelphia, architects.

The building may be erected by units.

Two exterior design studies were presented, one in the spirit of the Gothic, one with Renaissance feeling.

There is no basement under the nave or chapel. The ground slopes and allows well lighted rooms under the church school wing. Bowling alleys and other rooms are under hall and parlor. School rooms, pastor's room, pastor's secretary's office, and educational minister's room on second floor.

XX THE ARTS ALLIED TO CHURCH ARCHITECTURE

Art in the Expression of Religion

Art is human thought and emotion expressed in physical form. The finest of art may be called into the service of the worship of God who is the creator of all beauty. Through art, love is expressed. The highest of all art will express the love of God.

Art is meant to help us appreciate the beautiful, which is one form of the good. Appreciation of beauty is opposed to materialistic utilitarianism and therefore is an aid to spiritual appreciation and understanding. The arts testify to the beauty and goodness of human life, and are used to remind us of God and the great realities of Christian faith.

Architecture itself, the queen of arts, calls into associated service all the arts—painting, sculpture, mosaic work, carving, landscape architecture, together with the crafts of glass making, wood carving, metal work, embroidery—and provides for the highest purpose of music. We do not consider that there is an essential severance of the crafts from the arts in religious work. Good art diverts the mind from the subjective to the ideal. Beautiful art whether in music, painting or sculpture, does not encourage idolatry.

In recent times, there has been in prominent evidence work that reflects ugly materialism, lack of inspiration and loss of soul. This stuff, even though supported by government subsidy, has the same relation to that which the Christian calls art, as tin-pan beating by a group of maniacs has to a Christian's conception of music. One may disapprove certain horrible examples without condemning all "modern art."

Beauty consists in symmetry, order, proportion, harmony and unity with variety in fitness and expression of the ideal by means of the real. Beauty is more than pleasure, more than happiness. It is a unity. Pleasure and occasions for happiness are separate and irregular. The Church needs good art, expressive of essential beauty as a means of repairing the damage wrought by stress and strain in the bare matter of living in a mechanistic and competitive world.

In the worship of God, the arts find their highest expression and their supreme opportunity for correlation. Each of the great arts—poetry, music, architecture, sculpture and painting — needs the others in order to render spiritual enrichment. They can be the means of giving expression to the soul of Man.

Young people are expressing their wish to devote their lives to religious art and ask whether the Church will support them if they enter a career devoted to art. In the local church schools,

hobby clubs, and youth institutes, art again will have the breath of divine life breathed into her cold body and when churches become filled with the Spirit and when worshipers will think and pray and not limit their religious exercises to careless listening. We must encourage art, but be very careful of what is to be placed in a permanent position in the sanctuary.

Ugliness and vulgarity brought into the place of Worship do positive spiritual damage. The church must plan its program of glass or anything that may possibly ever be placed in the building. Then donors will give objects that appear in the approved plan—or else let their gold perish with them.

1. GLASS FOR THE CHURCH

Window glass is of such importance in giving character to a building, so strongly determines its spirit and atmosphere, and has been so often a source of error that it demands very special consideration by every leader in church building. Dr. Ralph Adams Cram speaks of a "bar-room" school of decoration that ran riot in our decoration and glass work during the forty years or so prior to about 1920. In nothing else is bad taste so glaring and objectionable as in glass. Much of the ugly glass of this period was imported from Europe. Since about 1920 much of the finest glass in the world has been made in the United States (of America).

The window is primarily for the purpose of admitting light and not for the display of pictures. When the primary purpose is departed from errors are sure to develop. Stained glass is decorative work and must be limited to this category or it fails. The stained-glass maker who executes a marvelously colored picture fails to perform his real duty. It is not his function to rival the artist who uses canvass for his medium. It is not his province to display great paintings but to execute a translucent decoration that continues the flat surface of a wall. We know that the glass is thin and flat, and should not deceive ourselves by assuming that we may have in the window a reproduction of landscapes—sheep with steel rods across their eyes, and the pictures stretching across the structural divisions of the window! Perspective is out of place in window glass.

The inspiring support given by religion to art is gloriously demonstrated in the history of stained glass. The church was the one patron of consequence of this great art. Here, indeed, art has inspired the worshiper, stimulated the highest spiritual energies, provided a means of expressing the highest values of the personality, and added to the joy of human existence.

The effect of good glass may be likened to music. The luminous spaces, vibrant with color and light, play upon the consciousness of the soul, helping to bring it into harmony with the Eternal Source of Joy and Light. With such possibility of achievement how crude it seems to fill these spaces with anything that clashes with the most religious feeling. The great glory of ancient glass belongs to the thirteenth century. Very old glass becomes pitted and otherwise affected by the weather and climate so that it takes on an interest that age alone can give. The vandalism of the two world wars which destroyed so much wonderful old glass robbed the following generations of irreplaceable beauty.

The introduction of stained glass into America came at an unfortunate time. With the Gothic revival in England (about 1820) came a better understanding there of the use of glass. Some excellent English glass reached America; for example, the Jesse window in Trinity Church of Boston (1877). But, in the main, a riot of ugliness and total misapprehension of the purposes and ideals of glass pre-dominated. In our ignorance we all but bowed down and worshiped the flaming picturesque windows and loudly did church boast of their "art" windows. The less (?) fortunate churches had to use a milk-and-water opalescent atrocity.

A picture may not always suit one's mood, but if it is in a window, it demands attention. A window of formal work or of mosaic or antique design, if beautifully colored, allows one to make his own pictures, allows the music to play to his soul. The leading we know is necessary, and it need not be hidden or disguised. Scenery may be merely suggested, not fully depicted.

Some churches allow themselves to be guided too much by the wishes of a donor, though if tactfully dealt with he will usually be glad to have his gift conform to the standard set by the architecture of the building. Place the entire glass program in care of the architect at the very beginning of the program.

Selecting Stained Glass

Remember first of all that glass is a vital part of the architecture of the building and the architect's guidance should be sought. The glass manufacturers should be selected with the counsel of the architect. Any manufacturer can employ an artist to make attractive pictures just as any architect can hire an artist to display a pleasing picture of a proposed new building.

It is not often that a church is financially able to install all of the stained glass required when the building is constructed. The church is fortunate if at the time of constructing the building, it can secure the chancel window and one or two others to set the standard for the glass program.

A program should be laid out for the glass for the sanctuary (and chapel) the whole having proper sequence, unity, and comprehensiveness. This will guard against individual donations of windows out of keeping with the plan. The type of glass should be determined, and the general program of subjects to be depicted. Then as many windows as possible may be installed, the balance of the openings being filled in with a good quality of leaded cathedral (hammered) glass, or other pleasing temporary glass, to be replaced with windows in keeping with the program adopted, as the church is able to purchase them.

All the windows need not be equally expensive but all must be in harmony in character and design. The chancel or west window may be richer and more expensive than the nave windows, but the complete program must be a harmonious unity. Then too each window must be designed separately in consideration of the natural or reflected light each receives and its location in the building.

Clear glass is desirable in the church school rooms. Medallions or "incidentals" in color or symbols outlined in metal, may be inserted. Great care should be taken to give a suitable churchly character to each room in the building. This object may effectively be assisted through skillful window design.

See Charles Connick's great book, *Adventures In Light, and Color* (Random House) for a list of American Churches with excellent glass—and for a thrilling treatment of the subject.

2. SYMBOLISM

Religious feeling and the apprehending of religious truth exceed in reality the expressive power of words. Great spiritual realities are revealed differently to each person. Words would simply handicap full meaning or create a misunderstanding for some. The range of symbolism is universal throughout Christendom. Symbols stand for ideas and yearnings which shall not pass away. Important symbols aid in recalling great events and truths that have inspired a saving faith.

There is now authoritative literature on symbolism in America. Let it be hoped that never again will furniture dealers and church decorators be permitted to "put over" symbols of pagan religions in Christian sanctuaries. This has been all too common in American churches. The church building itself is a symbol. Poole's *History of Ecclesiastical Architecture in England*, 1858, page 171, tells of the instructions given for the erection of an ancient church in which the various parts of the building—chancel, nave, narthex, etc. are considered as symbols.

Symbols should be used understandingly and constructively. They need not be limited to ancient forms, although scores of ancient symbols should be as intelligible to modern Christians as other forms of expression in literature and music. In the window of an open country church in Illinois, one sees a sheaf of wheat and a loaf of bread. In the First Unitarian Church, Chicago, symbolism of modern life is worked into a beautiful harmony with universal symbols of Christianity. All this is in keeping with a good theory of religious art, indicating that all of life is to be brought under the influence of religion.

Some Religious Symbols

Acorn. Latent greatness or strength.

Altar. Presence of Our Lord. (Both symbolic and utilitarian.)

Anchor. Hope. Anchor cross; Jesus Christ our Sure Anchor.

Baptismal font. Holy Baptism. Regeneration.

Candles. Jesus Christ; Light of the World; The Church in the World.

Chalice. Faith or worship, Sacrament of the Lord's Supper.

Church, parts of

Nave. Church militant on earth.

Chancel. Part of church beyond crossing; Symbolizes the Church Triumphant.

Arch. Triumph.

Spire. Heavenly aspiration.

Columns. Apostles. Saints.

Circle. Eternity. Perfection, Completeness, Three circles interwoven, Unity of Triune God.

Colors.

Black. Mourning and death; sometimes sin, evil and despair.

Blue. Truth, Faithfulness. Wisdom and Charity.

Green. Growth. Life. Hope.

Red. Love. Fervor. Holy zeal,

White. Light. Purity. Joy,

Cross. Symbol of the Crucifixion. Christ the Saviour of the World. Finished redemption. There are more than 100 forms of the cross.

Dove. Descending dove: Holy Spirit.

Easter Lily. Resurrection of Our Lord.

Evergreen. Immortality of the Soul.

Flame. Martyrdom. Inspiration. Youthful fervor. Purification.

Grapes. The Eucharist. Clusters on a vine: Our Lord and His followers.

I H C Sacred monogram. Abbreviation of Greek, IHCOYC, meaning "Jesus."

Lectern. The word of God.

Litany desk. Penitence. Prayer.

Pulpit. Word of God. Instruction. Hearing witness.

Sanctuary Lamp. The Real Presence.

Vestments, liturgical.

Cassock. Symbolizing devotion.

Chasuble. Symbolizing Christian charity.

Stole. Symbolical of the yoke of Man's sin borne by our Lord. Willing servitude.

Surplice. Symbolizing innocence. Purity.

Vine. Christ, the vine; his followers, the branches.

3. THE MINISTRY OF COLOR

God never intended that the sanctuary for his worship should be drab, ugly, or depressing, or he would never have created the glory of the sunset, the color of the sky, the land, and sea—even the desert is rich in color. Color—animate, pliable—can do marvelous things. It can make a room appear larger or smaller, cooler or warmer. It can lower ceilings or push them way up, make a wall seem to recede or advance. It can establish the mood of a room. Color can make a north room gay, flooded with sunshine. It can make a big, bare room into a snug little haven. It can make a room restful, studious, shy, frivolous, glamorous, breath-taking. Color has qualities which are measurable and understandable.

Now we know that color in hospitals and sanitariums are effective in the cure of the sick of body or mind. Color can calm or excite, or create a harmonious, restful atmosphere required for complete recovery. Studies have shown what colors and types of patterns are positively bad in their effects on patients, what colors disturb or depress—what induce repose, improve a person's outlook and happiness. The monotonous white once used in hospitals is the ugly descendant of whitewash, used in hospitals when they were alms houses.

The use of color is a science. We all may appreciate music, but it takes a musician to create the music. So in the use of color, trained and skilled professional service is necessary to give us the effectiveness we desire in any room, to be used for divine worship, teaching, or fellowship in the House of God. Today there is such a wealth of color! Manufacturers have employed the resources of modern science to develop a limitless variety of hues.

The wealth of tones imposes more responsibility upon the buyer. Every tone, to be beautiful, must have its fitting companions, just as every musical note must have its fellow notes to form a harmony. Certain colors go in pairs, such as red and green, yellow and violet, orange and blue. Equal areas of pairs of colors are disagreeable. There must be only a small quantity of a complimentary color against its opposite; as in music, there must be rhythm in the use of color. This means planning to use color in varying strengths.

What should be the effect upon us as we view the interior of the house of God? Almost daily, we receive inquiries from church committees and pastors, saying, "We are planning to redecorate our sanctuary and wish to have the work done immediately. What colors do you suggest that we use on walls and woodwork." To this we answer, "Do not attempt any redecorating for at least a year and during that time, select trained, professional talent to examine the building, prescribe the colors and quality of material to be used, and specify in detail the steps in preparing the surfaces and applying the materials to be used in redecoration.

Just painting the smallest room may effectively influence the religious and emotional life of many persons.

The atmosphere created by painting, woodwork and floor coverings are most important parts of the architecture of a building. Decoration in a church is not just the task of an interior decorator. If an interior decorator is employed, he should have studied church architectural design, must not only know but feel, the purposes and effects desired in any of the many rooms in the church building and he must work in close collaboration with the church architect; that is, an architect who is skilled in church architectural design. The architect should approve the colors when first laid on and then approve the completed work. The money spent for an architect and for an interior decorator (in collaboration with an architect) will more than be saved in the cost of the work done as well as provide the many advantages of professional services.

Interior decoration is an art; art today is not limited to the "fine arts" alone. It is an essential element in the life of every person. What seems to be the simplest problem of "painting up" may be a situation which, if bungled, will cause distress to many throughout a term of years and result in financial loss to the church. The people of the church must make sure that those who guide the work are thoroughly acquainted with all the problems involved. One reason why we cannot satisfactorily suggest colors at a distance from the building is the innumerable local factors that influence the results—the natural light received in the room, the dark corners, shadows, the size and proportion of the room and direction of reflections.

The distance of color within a building from the eye of the beholder is a most important factor. One building committee insisted on a certain color tone for a ceiling against the advice of a competent church architect. The architect saw this color sample as it would appear on a ceiling 40 feet above the eye and in keeping with the architectural character of the entire room. The committee did not take the architect's advice and, of course, after the building was finished everyone complained that the color of the ceiling was too light. Employ an architect who is trained and experienced in the use of color and abide by his decisions.

Other things which the people need to know in selecting competent advice are the value of glossy surfaces, colors that will look clean—while light colors may be advised for dark rooms, care must be taken that they will not look muddy—the effect of reflection and of the lighting within the room, the necessity to combine and blend color tones to create an impression of beauty. The degree of light reflecting efficiency of different shades must be considered. Forest green, for example, reflects only eight to ten per cent while old ivory reflects seventy-two to seventy-six per cent of the light received. Church school rooms must possess charm and reflect cheer. The finished work — the result of the skillful use of color on different kinds of surfaces and materials may indeed be likened to the work of a leader of a symphonic orchestra.

The trend is toward honesty and simplicity. Stenciled, curly, meaningless ornamentation is to be avoided like deadly poison, as are many of the garish wall treatments that may be all right for rathskeller or saloon—we wouldn't know—but we do know that they have no place in the house of God nor in the rooms of the teachers. Avoid too strong colors. Be careful of mottling, "antiquing," stippling and other irreverent and garish effects, possible in the wealth of modern materials and methods. Avoid painting inscriptions, compelling us to read the same sentence every time we see it. Rather use a color tone that is restful and that leads us to prayer or praise, or a symbol that will allow us to frame our own individual message according to mood and need.

The owner must insist on excellent quality of paints, backed by companies with a reputation to maintain, and used by persons who are conscientious and skilled. Avoid an excess of thinners and driers used by unscrupulous craftsmen who do not consider proper weather and temperature. These weaken the paint, cause uneven drying and result in early failure. Better pay the painter more per hour and let him work from nine o'clock to three. These and many other vital factors will be properly controlled if the right professional talent is employed to guide and control the work.

A commission composed of churchmen church architects and color engineers is preparing a brochure on the use of color in religious work. Write to paint manufactures for beautiful book-lets.

While we cannot tell what colors to use on your church walls—and we should not—let us point out certain important factors in addition to those noted above. Do not be afraid of color. Be afraid only of the misuse of color. Like dynamite, color must be used with care and skill. There are light blues and greens, there are grays for rooms that receive much sunlight and canary yellow and other yellows to cheer up the Sunday School rooms.

Wood has been terribly maltreated in churches. Beautiful wood has been covered with ugly paint. Here, in the treatment of wood have expert guidance. Know that sturdy, strong oak is not to be as finely polished as satinwood or mahogany. Avoid glossy ceilings. There are suitable treatments for Gothic and Colonial or Romanesque type of sanctuaries, but we will have, increasingly, beautiful modern architecture that may not be labelled in any of the traditional styles and there will be a more skillful and liberal use of color. Beware of too much white in any room. God did not use white so very much except on moving clouds and cold snow.

All four walls need not be painted alike. The end walls of a long room may be brought nearer by painting them a darker, contrasting color. Badly proportioned rooms thus may be "cured." Tinted calcimine is less expensive than oil paint but some brands cannot be washed and are less durable. Large painted areas should have more subdued colors than small areas.

A Wealth of Materials

Not only is there a wealth of color but a great variety of materials that may be used to create the desired environment within a room. Textiles are among the most important materials for decoration. Find out the things that may be done and the materials that may be done and the materials that may be used. Covering an old plaster wall with burlap may completely change the effect of the room.

Floorings

Sometimes it seems that if a room is covered with a beautiful carpet no other decoration is needed. Drab, "lifeless" church carpets doubtless have been a severe handicap to religious work. The many manufactured floorings available today make it possible to create through their use rooms that are quiet, peaceably colorful and effective for their uses. There is an increasing use of carpets since the advent of modern cleaning equipment. It adds color and warmth and quietness to a room and improves the acoustics. Old wooden floors may be sanded down and stained. The aisles of the sanctuary may be covered with carpet, composition tile cork tile or in massive buildings, flagstone or tile is permissible.

Special Decoration

Any ornamentation used in a church should be in the form of symbolism, such as the use of the grapevine motif and things of ecclesiastical significance. There is so much of this material available that it is unnecessary to have anything without significance, either in color or decoration in a church. Flowers and fruits have been conspicuous in Christian symbolism as well as a great wealth of other forms, including the numbers, „ 2, 3, 5 etc.

Symbolism in Color

The appreciation of the religious use of color will include a recognition of symbolic values in colors. Red symbolizes strength, love, martyrdom and fire; yellow—wisdom and constancy; blue—faith, loyalty, adoration; green—hope and immortality; purple—royalty; white—light and innocence. Black represents sorrow, death, but this is hardly proper from the standpoint of Christian faith (and away with funeral black choir robes). Gold is symbolic of heavenly glory. (See Stafford's *Christian Symbolism in the Evangelical Churches*—Abingdon-Cokesbury 1942).

PAINTING

Painting. At the present time, employing an artist for religious painting involves an element of risk, but the Church must indicate its purpose to encourage and employ **good** art. Let paintings be placed for the present on side walls and in rooms other than the main sanctuary. Avoid placing a painting in a position so that it must be viewed every time one attends a service of worship. The same amount of money required for a painting spent in glass or fabric is more likely to be appreciated, in this position. The writer saw in the year 1945 a brutal atrocity set above the altar in a church. It was paid for by an old lady who wished to encourage a young "artist." It cost as much as a beautiful window. There are many places throughout the church building for good paintings. Fabrics also help to avoid bare places, lend beauty and give life to rooms.

Sculpture. Avoid as the Evil One the crude "stuff" that passes for "modern art" and sculpture today. In all ages there have been both good and bad, intelligible and unintelligible art, real artists and those who are merely addled.

In sculpture, the harmony of hand and thought may be expressed. Beauty of line and form, expressing thoughts too deep for verbal utterance, are caught and given permanence. Rodin's "Hand of God" puts in permanent form a dramatic expression of Creation, climaxing in "The Thinker." It is too bad Rodin did not, or could not, do "The Worshiper." Excellent sculpture incarnates in permanent form human thought, emotion, character and heroic action.

Mosaic. It is quite interesting to note that the Greek word from which mosaic is derived means "belonging to the Muses." The decoration made by inlaying small pieces of colored stone, glass or other material offers endless opportunity for attractive enrichment of the church building. The possible patterns that may be designed are limitless in variety and scope.

The wealth of mosaic in that other-worldly cathedral of St. Mark's in Venice (God preserve it!) made Ruskin say. "The whole edifice is to be regarded less as a temple wherein to pray than as itself a Book of Common Prayer, a vast illuminated missal, bound with alabaster instead of parchment." (*Stones of Venice* ii, 4, 46.)

Metal. Some of the most beautiful work in Church art is in metal.

5. THE CHURCH ORGAN

The principal instrument in the ministry of music, through Christian centuries as well as the chief piece of church furniture has been the organ. But what is an organ? By an organ we mean a wind instrument, consisting of from one to many sets of pipes, sounded by air under pressure, and played by one or more keyboards.

The history of the organ goes back to about 2000 years B. C. The first organs in Europe appeared late in the 8th century. By the 15th century the organ was flourishing in Europe, with many noted clerical and lay builders. The organ of that time contained, in a rough form, the fundamental elements of the organ as we know it today.

The organ, the king of instruments, consists basically of four components. These are—a suitable wind supply—that is, some means of delivering a quantity of air under moderate pressure; a windchest—an air tight box containing the valves which, when opened, admit air to the pipes; the pipes; the actual sound-producing portions of the instrument; the keyboard for controlling the valves that admit the compressed air to the pipes at the will of the performer. All other parts are incidental to these basic elements.

One might quickly dismiss the purely mechanical parts of the organ with the statement that they represent a very high degree of mechanical ingenuity and engineering skill. The total elements however, afford an opportunity for the expression of the artistry and imagination of the true craftsman and the artist designer.

The success or failure of the organ depends upon a combination of factors. The first requirement is good design. The second is good location. The third is a matter of acoustical environment. Nor should the importance of skillful playing be overlooked.

The matter of organ design may safely be left to the reputable builder. Most church committees are necessarily almost totally ignorant of the technical aspects of the organ design. The church should, therefore, approach the organ builder with the same trust and confidence with which one approaches one's own physician. He is the expert who is called in because the expert's advice is needed. No reputable builder will take unfair advantage of this trust. It seems that there should be a place for an organ architect or organ consultant. We are constantly on the lookout for such service. But at the moment, professional service of this type is quite limited.

The church would do well to investigate the builder. His general reputation for sound workmanship, the success of his various installations, and his financial rating can all be looked into without much difficulty. Those who measure up are worthy of consideration.

One or more good builders may be invited to go over a situation and make recommendations to the church committee. It is the duty of the organ designer to plan an instrument **designed to do a certain job in a certain place**, keeping in mind all of the varying conditions to which it may be subjected. The designer **must estimate the acoustical properties of the church**, must work within the space limitations imposed, must constantly recall the needs of the particular type of service or ritual, and then plan the total design of an instrument which will meet these purely individual and local conditions while being suitable for playing the fine things in the great repertoire of organ music. One may easily see that just buying any instrument is not the way to secure a suitable instrument to do in any certain situation what an organ is supposed to do in **that particular place**.

The organ builder does not object to the location of the organ in a chamber providing it is high, wide, and relatively shallow with sound reflecting wall surfaces and large tone openings. A chancel location, with the organ on one side of the chancel only, speaking into the chancel through large tone openings, is a most satisfactory arrangement. Conditions frequently require a divided organ, although this is not usually best for the builder. A divided organ poses problems of temperature and tuning, as well as tonal blend, which are often left unsolved, hence the builder's usual preference for a unified location.

The organ should be located so that its tone will most advantageously blend with that of the voices of the choir. This further implies that the console and organist be located so as to get a balance perspective on the two tone sources. Only when this is possible can the organist secure anything like balanced blend. At the same time the console and organist should be so situated as to

command a clear view of all that goes on in the church, from the start of the processional, if there be one, through all of the service to the end of the recessional. This suggests a side location, with the organist sitting so as to face across the chancel with an easy view to the rear of the church or to the altar. Some organists prefer to sit facing the nave so the console does not prevent their seeing across the chancel.

The generalities of layout just mentioned should be taken into account by the church architect when he prepares his first drawings. It is his responsibility to provide for ample organ space that is readily accessible, and to provide ample tone openings so that the organ the church buys will render adequate tonal return on the investment. And he should provide for the efficient location of the console so that it may be useful in conducting the service. A clean, dry, airtight, soundproof room is a positive requirement for the organ blower. This should provide a solid foundation for the blower and motor, and should be accessible.

The architect has given to him in every organ installation the opportunity to show his real artistic ability. The design of truly dignified and appropriate case work is a challenge that many architects apparently do not feel qualified to accept. A mere grille will suffice to cover the organ tone openings, but it can be very ugly and monotonous.

The question of location and space for the organ is of greater concern in the case of church remodeling. It is often possible, however, to secure adequate space through wise planning.

The church organ, in a sense, is only as good as its acoustical environment permits it to be. It may have been well designed and properly placed, but if it encounters adverse acoustical conditions it can never be the instrument its planners intended. It is frequently thought wise to treat the interior of church auditoria with acoustic tile or some other of many sound absorbing materials in order to reduce resonance and aid the speaking voice. Within certain limits this is good sense, but it should not be done at the sacrifice of all natural ring, since the building then becomes "dead" when filled with people and the effects of musical tone are negated. Organ tone improves in resonant space, hence every reasonable effort should be made to provide such space.

At this time (1946) a portable pipe organ made by companies of the very highest reputation may be purchased for \$2,750.00 installed. When asked to consider electronic devices in the place of pipe organs, one should ask whether it is truly an organ? Does it produce sound on the percussion principle or on the organ principle? Does it ever have a cipher? Does it have a mechanical quality of tone? Is its tone the best possible for church use? What servicing will it need? How will this be supplied?

Perhaps the wide spread use of electronic instruments instead of organs occurred because churches were too often "over sold" on pipe organs. When organ builders charged \$40,000.00 for organs for churches that had unsuitable and inadequate rooms for childrens work, and in addition sold a stockade of dummy pipes it was time for some kind of rebellion. But, pipe organs of excellent quality can be built for much less than \$10,000 even in these times of costs. Let us remember that it is far better to have an instrument of excellent quality to which more stops may be added later than a large instrument of inferior quality. A great brass band may not be as enjoyable from the musical standpoint as a much smaller but far better orchestra.

6. SPIRES, TOWERS, AND BELLS

The tower or spire is another feature of the church building that has moved poet and peasant to moods of admiration and worship. Greek and Roman temples had no spires.

The tower provides a note of climax in the design and emphasizes the upwardness of Christian aspiration. The architectural composition should be carefully studied so that the tower may take the most fitting position. Usually someone on the building committee urges that the tower be at the front "right on the corner." In some cases it is justifiable to place it so, but as a rule it is more pleasing when nearer the center of the entire design, forming a high note to which the eye is led by all the other elements or parts of the building. The nave and other sections of the building appear to better advantage when not hidden by a front tower. A significant design can be secured without a tower, and some buildings so designed are more expressive than some others that have towers. A belfry or bellcote furnishes a pleasing feature when a dominating tower cannot be afforded or would be unsuitable. The fleche (from the French meaning arrow) when well done, is a pleasing feature in church architecture and should be used more frequently. Some may object to a tower because of its cost, but if we spend money for music and pictures, we may justify the cost of the tower by its aesthetic values and the inspiration it provides, as well as its utility in bearing the bell, chimes or amplifier. Some modern plans call for utilizing the tower to house air conditioning equipment. With the use of modern amplification, the tower may contain the organ chamber, even when the tower is not near the chancel.

Let the architect place the tower in a dominating situation on the site. The tower should indicate the "door of welcome" to the church plant.

The Church Bell. The Church, in a materialistic age, should not abandon a means of spiritual ministrv which through the ages the community has expected and accepted. The church bell is and effective and dignified means of propagating the Truth. The use of the church bell is a fascinating subject for one who loves to search out the thoughts and feelings of Christian people of all lands. Walter's book, **THE CHURCH BELLS OF ENGLAND**, (Oxford, 1912), contains a bibliography of two hundred and fifty items.

In later years fine sets of chimes have been installed in American churches, and thousands are blessed by the sound of bells.

Amplifying systems for the music of bells and chimes are increasingly acceptable and will continue to be improved. But avoid cheap untested assembled systems. Here again have the architect bring the very best information on sound amplification. The church may wish to distinguish between the amplification of sound, such as organ music, and the creation and amplification of synthetic music (or sound).

Be very, very careful not to annoy the community with any unpleasant sounds or effects. Have an architect approve any equipment before purchase. Have him examine contracts and guarantees. Arrange for servicing.



A FELLOWSHIP HALL

Such a hall is suitable for a great variety of social and recreational activities.

XXI MECHANICAL EQUIPMENT

1. CHURCH HEATING, VENTILATING, AIR CONDITIONING

The heating equipment of a church should get more attention in its planning than that of any other building of similar size. The relatively limited use that some areas get means that rapid heating up is an essential requirement. Other areas in the church plant have different uses and the times of use differ widely so the heating system of church must have unusual flexibility. Then too, many churches do not have adequate janitor service although the employment of full time janitors of good qualifications fortunately is increasing. But automatic controls should be provided in the church heating system and automatic firing of some kind. In general the automatic controls make for operating economy in the difficult problems of church heating. The various areas or zones may be controlled either with an automatic or manually operated valve. Automatic control and automatic firing by oil burner or stoker will make for economy of operation, as to fuel cost and the time required by the care taker.

These few notes should indicate the high importance of expert architectural service in planning the church heating system. Either a member of the architect's staff or one employed by him for the purpose must be a thoroughly competent heating engineer. This work of the heating engineer must not be placed in the hands of a heating contractor or salesman.

All of the old difficulties about adequate church heating can be overcome or rather may be completely avoided in planning new church buildings or improvements. Take for example the common complaint that the choir or chancel space is not comfortable. The chancel structure may be compact and very badly ventilated so that the air is dormant and the choir may consist of a rather large group of people. A competent heating engineer working in cooperation with the architect may install a unit for recirculating the air in the space below the chancel, fitting it with a discharge duct and inlet grills for fresh air so that this space can be made comfortable. But no amateur or heating contractor can be expected to solve a problem of this kind. Changes of air will counteract the tendency of heat pockets forming or overheating of certain areas and underheating of others.

The building committee can, of course, stipulate the heating and ventilating effects they desire to have accomplished in all parts of the building. Then they must place the whole matter in the hands of the architect who with his heating engineer, or the heating engineer of his selection, will prepare the plans and specifications that will result in happiness all around with respect to the heating and ventilating. We all must remember that the heating of a church plant is a problem entirely different from that of any other type of building.

Almost daily we read of new methods of heating. One company is installing base board heating equipment. Some say we shall draw heat from the earth, a sort of reverse of refrigeration. Much is claimed for "radiant" heating. No one can tell what may be developed. But, let others do the experimenting before the church tries the fascinatingly new thing.

No longer will churches that as a matter of course have heat supplied in winter, cheerfully continue to endure the discomfort of too much heat or too high a degree of humidity in the summer. Comfort and well being depend upon the relative amount of moisture in the air, the rapidity of air motion across the body and the cleanliness or quality of the air, and the temperature being at a degree which is satisfactory. It has been found that people produce a greater amount of work in air conditioned rooms than the same people accomplished in rooms that were uncomfortable in summer. Complete air conditioning includes receiving a supply of fresh air from out of doors, cleaning the air completely from dirt and smoke, the air being warmed or cooled as may be required, the humidity increased or reduced. To completely air condition a church plant some of whose rooms are used at different or irregular times requires careful study applied to each individual case. Great progress has been made in improving air conditioning equipment for different types of buildings. Air conditioning equipment can be installed in units in the different rooms. Far more elaborate equipment could be installed with ducts reaching to all parts of the building. All churches planning to build or remodel in areas where summer heat or discomfort from humidity obtains, should by all means have a report made on possible air conditioning equipment and the cost of installation. In planning new buildings provision should certainly be made for future installation if it is not decided to install the complete equipment during the construction of the building. Some churches have already announced that the cost of installing air conditioning equipment in existing buildings will be paid for within a very few years on account of the increased offerings through the summer weeks.

Ventilation is a part of air conditioning. Insure a supply of fresh air at all times in all parts of the building. And don't just depend on a favorable wind to blow it in at the right time and place.

2. LIGHTING THE CHURCH

There are no traditions of church lighting which have stood the test of time. While architects and craftsmen have through the ages designed and made beautiful glass windows, decorations, etc., they could not use electricity and therefore the church builder stands in a new, rather untried field, when it comes to designing the church lighting. Here again for a book like this it should be

sufficient to say that the leader of the enterprise in the church building committee must simply insist that the architect have on his staff, or have available, a competent lighting engineer, one who is not concerned with selling of products or equipment or power. Some churches have turned to the power company for advice on church lighting with perfectly terrible results.

However, a sub-committee on lighting could do a great deal of study, confer with the architect or engineer with the architect's cooperation, and have such an understanding of this very important matter that when suggestions and recommendations are made by the architect, this committee can help support his recommendations and help the church understand the reason for the architect's recommendations.

We require in the sanctuary not only sufficient light but sufficient light without destroying any of the effectiveness of the room devoted for worship. Too bright light where bright light is not needed will do much to destroy the total effectiveness of the room. Bright light has an effect on the colored windows, and of course, an inadequate amount of light where good light is needed also hampers the effectiveness of the church work.

We must remember that we need the light upon the hymn book or other materials used in worship and in the other work of the church. Also, light must be directed upon the chancel or altar, or other places that should for effectiveness receive a greater amount of light.

Many fads have occupied the field of church lighting, such as indirect lights which throw the light up to the ceiling, often making very prominent the ceiling that too often was so ugly it ought to be hidden. Then it was hoped that a part of the light thrown to the ceiling would finally reach down to the pages of the hymn book. Of course this was a totally wrong system and required ever so much more electric current which was a good thing, of course, for the power companies.

Let's be careful to avoid in church work any equipment or methods that have not thoroughly been tested out in other and similar places. Even then we may not have proof that it is suitable for church use.

The lantern type of fixture properly arranged, and especially when hung from rather long chains, adds to the architectural effectiveness of the room and results in very efficient lighting but the lanterns must be carefully designed not only to fit the architectural character of the room, but so designed that the light is diffused, no glare is caused when looking directly at the fixtures and the light is directed where needed. Where there is a center aisle and two banks of pews, a row of lanterns is hung above

each of the two rows of pews, the floor area being properly divided and a certain area served by each lantern. Have the architect design the lanterns, of course. We have all seen horribly large lanterns installed in churches whose size should have indicated lanterns half the size of those purchased from a salesman rather than being designed in the first place by an architect. Supplementary light in addition to the lanterns may be required for specific areas. Then there must be separate control for each type light and for each of the areas such as pews, choir, pulpit, altar, etc. Lighting also does much to accentuate the architectural features. Needless to say, the pulpit and lectern should be adequately lit without special lighting fixtures attached to these important pieces of furniture. We do not think of having fixture fitted to each hymn book held by members of the choir and no such fixture should ever be attached to pulpit or lectern, nor should they be needed. In many cases the chancel and altar can be very effectively lit by means of reflectors or flood lamps concealed behind the arch. Of course, any lamps suspended in the chancel in clear view of the congregation should have shields.

These fixtures can be made very ornamental and add considerably to the architectural effects of a church.

Dr. Fred Eastman has written most helpfully about the use of light in the Church. He says "Light and music are both essential for developing the proper mood; they should work in harmony and not against each other.

At the beginning of the service the auditorium or nave should be dimly lighted and the chancel and altar emphasized; when the hymns are sung the lights in the auditorium should be fully lighted, then dimmed during the prayer, the anthem and the sermon. The light upon the choir should be brought up when it sings and dimmed afterward. The lights upon the pulpit should be intensified when the minister is reading or addressing the congregation.

1. The chancel lights. These should be from concealed sources and should flood the choir and altar with a bright, but not a harsh, illumination.

2. The pulpit light. This should come from a small spot light located in the arches twenty to thirty feet above and in front of the minister and shining down upon his face at an angle of about forty-five degrees. It should be equipped with concentration rings so as to prevent a spill of the light to right or left.

Good lighting not only contributes to efficiency and eyesight conservation. It also helps to provide environment in which one can live healthfully and happily. In the church school rooms good lighting helps to create the surroundings that affect the moods of children. The development of pleasant, cheerful, com-

fortable, efficient environment, helps establish the right psychological attitudes which can greatly be aided through light and color.

Light must be evenly distributed over the entire room used for school work. The color of the woodwork and of the paint on the walls and ceilings affect the lighting according to the amount of light absorbed by different colors and surfaces. Germicidal lighting units are now being installed to reduce the prevalence of bacteria within the room. (Doctors are not agreed about this).

And of course efficient lighting and lighting effects in the fellowship hall and for the stage are so very important. Here the lighting will be designed not for worship services but for educational and dramatic use. Something of the character of theater lighting should prevail. This means soft and regulatable house lights in front of the stage curtain, while behind it there will be needed a simple assembly of stage lights—borders, floods, strips, spots, and bunch lights. (For detailed specifications of such lights for church use, see "Drama in the Church" by Eastman and Wilson, page 152-4.)

The entrance of the church should be flood-lighted to make it attractive. Flood-lighting may also be used effectively on towers and spires when they are of outstanding beauty.

Mechanical devices are now available for providing any suitable effect. More than a hundred different types of electric bulbs may be had, ranging from three to a thousand watts in capacity and in various shapes and colors. There are standard control units for spreading and for concentrating light beams. There are also compact units for tucking away into restricted spaces, elongated light strips to be advantageously employed in many ways, and simple wiring devices useful in providing receptacles.

Dimmers are recommended to provide flexibility in each of the circuits and should be so planned that an even illumination is obtained at one-third or one-fifth the normal intensity at times when the subdued lighting is desired. The dimmer method of control brings about a gradual and unnoticeable change in the lighting intensity and a corresponding direction of the attention of the congregation.

Don't have many lights on any one circuit. Have noiseless switches.

3. HARDWARE AND FIXTURES

Nothing in or about the house of God should appear to be lacking in dignity, beauty and durability.

Much of the charm of old world churches is due to the sturdy and well designed hand-made hardware. A door lock was made to keep a door fastened; a hinge to hold it in position.

Doubtless we shall see an increasing use of metal work in and around the new church buildings. There are pleasing opportunities in this field which will prove attractive to craftsmen and churchmen.

All plumbing fixtures and hardware must be of excellent quality and workable. A few extra dollars spent for a better quality of hardware and plumbing fixtures will be of the most satisfying expenditures of the church building program. All designs and specifications of quality for hardware and fixtures are to be prepared by, or selected by, the architect, and nothing should be permitted to be used without his approval.

4. MECHANICAL CONVENIENCES

A sub-committee on furnishings and equipment may have a very interesting time investigating the various mechanical fixtures and other equipment that might be adaptable for church use or whose use would facilitate the work of the church. We list a few items purely by way of suggestion. Of course the committee must make sure that the usefulness of anything suggested will repay its cost. Sometimes people will have hobbies and will wish to go to the expense of placing an electric eye in a kitchen door which may not be used once a week throughout the year. And yet this or other conveniences may be worth much more than the cost, in the use of the church plant.

ITEMS THAT MIGHT BE INVESTIGATED.

Ash lifts if coal fuel must be used.

Dumbwaiter to lift supplies or to reach to another floor from the kitchen.

Continuous hot water supply.

Vacuum cleaning equipment and piping for same.

Telephone booth.

Janitor's closet and water supply on each floor.

Drinking fountains.

Door closers.

Hat and coat checking equipment.

Janitor's workshop.

Fire protection equipment.

Suitable and well located storage space for everything movable.

Fireproof vault.

Fireproof storage space for cleaning fluids, etc.

XXII THE ACOUSTIC DESIGN OF CHURCHES

The use of steel and other non-absorbent materials in the construction of large auditoriums has made the problems of acoustics an urgent one, but this highly important matter need not be left to chance. Scientific study of the subject now makes a bad acoustical condition utterly unnecessary. Manufacturers of acoustical materials have made great progress in acoustic adjustment and developed various products with a greater or less degree of merit.

The acoustical characteristics of a room are satisfactory when a speaker in any part of the room, using a normal tone of voice without strain, can be heard distinctly in every other part. There must be a certain degree of resonance and liveliness in the room, and yet all sound waves should die out in about two-tenths of a second so that there will be no disturbing echoes.

The leader in church building must know whether or not the problem of acoustics is being properly handled. However, no one would wish to guarantee successful acoustics in a room, for much depends upon the quality and effectiveness of the original sounds. Some speakers have not learned to speak properly. Sound from a speaker or musical instrument travels out in waves, and usually with great velocity. As a result it is rapidly reflected back and forth between the walls. This causes overlapping and confusion of sounds. If a speaker stands close to a reflecting surface behind him, the reflection is almost simultaneous and re-enforces the sound, but if the reflecting wall is more than twenty-five feet from the speaker, confusion is likely to result.

A curved wall or ceiling produces a focusing effect and increases the likelihood of trouble. A curved sounding-board above the speaker's head is bad. A Gothic ceiling is better for acoustical purposes, and sound-absorbent material is more effective on a flat ceiling. If walls and ceiling are made of hard sound-reflecting materials, little of the sound is absorbed and overlapping of the reflection results. For good acoustics, the sound that we wish to hear should reach us with suitable intensity and distinctness, then die out and leave the field clear for the arrival of the next sound.

When an auditorium is filled with an audience, particularly when heavy clothing is worn, much of the sound is absorbed and the acoustics are greatly improved. But the room itself should be so designed as to avoid defective acoustics, for speakers are entitled to the confidence which comes with the knowledge that the room is correct for speaking purposes.

It is important to have correct acoustics for music. The amount of sound-absorbent material to be installed for good effect should be determined by careful calculation. Too great an absorption of sound will not be satisfactory, particularly for musical purposes, since the room will have a dead or lifeless effect. Sound-absorbent materials should be placed upon reflecting walls, particularly those at a distance from the speaker, and the walls about the speaker left reverberant. An auditorium of rectangular shape is preferable for good acoustics, provided the sound comes from a narrow side.

Churches with unsatisfactory acoustics should immediately take steps to have this handicapping situation remedied. The commercial concerns dealing with the problem will be glad to send engineers to make recommendations, which are likely to be in the nature of increasing the proportion of the sound-absorbent surfaces in the room. We should, however, advise the employment of a sound engineer who has nothing to sell. In badly designed auditoriums, particularly those shaped like a clam shell, the problem may be difficult. Smaller churches may improve the acoustics by the use of heavy hangings at windows and doors, and especially at the rear of the room.

When employing an architect inquire as to the ability of his staff to insure good acoustical conditions in every room. The architect must present before the specifications are prepared an engineer's report on the acoustical effectiveness of every room in the building.

Another consideration is the protection of every room against sounds from the adjoining rooms. Outside noises interrupt and distract — each room should absorb its own sounds before they have a chance to reach any of the others. The kitchen and classrooms in particular should have walls and ceilings which will confine sounds to the place of their origin. Proper attention to these details will help greatly in the prevention of noisiness throughout the building, and make it possible to use all of the building all the time.



-YOD-
- WITHIN - TRIANGLE -



- THE CREATOR'S STAR -



- THE - SUN -
- SON OF RIGHTOUSNESS -

XXIII SITE PLANNING AND LOCATION

Landscape planning should be considered while the preliminary plans for the building are being developed. Site planning includes the best possible study of the placement of the building on the property taking advantage of natural slopes, the need for driveways and walks, all of which must be planned along with the planning of the building and not left until after the building plans are prepared.

The architect working with the landscape architect can secure harmony, unity and balance in a kind of sequence leading up to a climax in the total setting of building and grounds. A distinctive overall picture is more likely if planning of the site goes along with the planning of the building. Some architects are quite capable of handling this whole problem of site planning and building planning but there certainly is a very real need for the landscape architect in church building.

When selecting the site for a new project in a new location such matters as harmonious neighborhood features, accessibility, future trends of population, industry, etc., in the region must be considered.

But it is also of very high importance to secure an adequate area of ground. Increasingly it is becoming necessary to provide an ample parking area for automobiles on ground which the church owns. A modern church building needs to be spread out with direct outside light for all rooms. Provision must be made for future extension. No portion of a church building should be more than two stories high. This means adequate ground space.

New church buildings are now being on sites of several acres. Then there should be space for planting of trees to protect the buildings from the noise and dirt of city traffic and industrial noises and dirt.

Have the architect visit a site before it is purchased for he will think of many things which may not occur to persons who are not constantly engaged in planning buildings. A landscape architect will know all about the successful use of shrubbery and trees on the site. He will know what native shrubs can be moved and successfully cultivated in a new location. He will know how to blend colors of foliage and blossoms and what shrubbery and trees can successfully exist outside of their natural environment; what grass to be used in certain areas of the site, and how to select shrubs and plants with a view to the amount of care required through the season. Few churches will as yet employ full time gardeners, although the time is coming when churches will make use of the boys' clubs and others under expert professional supervision in caring for the grounds.

There is a trend to avoid locating churches on heavy traffic routes. People will find the kind of church they wish to attend, and the live church will find them. Far better to travel an extra few blocks and find a building nicely arranged on ample and beautiful grounds in a quiet location where one's family can approach the church without endangering their lives in dangerous traffic rather than to attend a church in a noisy, dirty, crowded location.



Church at Osomo, Chili, S. A.

XXIV REMODELING LARGE AND SMALL BUILDINGS

The church that has a substantial but badly planned building or one that is inadequate for its present and future program, need not abandon the hope of having facilities that would enhance the needed work of the church.

Every church building, even those most recently built, should be studied from the viewpoint of the task of the church for these times and for the immediate future. Often just building a partition across a large room, dividing it into two rooms, will tremendously increase the efficiency of the space. Some rooms, even in small churches, have ceilings high enough so the space to be divided into two stories of rooms. Seating plans in many churches have been rearranged together with a remodeling of the pulpit platform so that the "auditorium" was transformed into an effective sanctuary.

The same type of church building organization should be assembled and set to work for a remodeling program as would be suggested for a complete new church building enterprise. A remodeling project must be based on the needs of the program and not upon the program and not upon the possibilities of the building as a controlling factor. In hundreds of cases the writer has been asked to visit a church building to make suggestions for remodeling it, where it is found the church had spent practically no time in assembling its program for the immediate future, then basing the statement of needs and requirements upon the needs rather than just to consider the possibilities of the building for remodeling.

The financial organization and program for an improvement enterprise should be the same as for a new building. A congregation may achieve a tremendous uplift in spiritual power and church morale through an improvement program.

The steps then briefly are:

First determine the needs for rooms and equipment.

Second, employ during this preliminary period of study and fact finding the best available consulting service.

Third, employ the very best available architectural service for an examination of the building structurally and for preparing the outline plans for improvements.

Throughout the entire enterprise conduct the promotional publicity, educational and financial programs exactly as in a new enterprise.

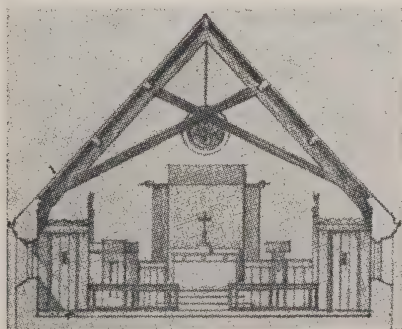
Quite frequently we are asked to offer suggestions for remodeling the so-called Akron style church building in which the school portion of the building is a high ceilinged room with a gallery. Such rooms may be divided by construction of level floors, into two or even three stories of useful rooms. If roof supports do not intrude upon the floor area, then the best method in such a building is to tear out the existing gallery clear to the wall, then build level flooring across the room dividing both floors into rooms with partitions of sound proof construction as may be desired.

Many small buildings can be improved by construction of partitions. There should not be any such thing as a one-room church building in present day life. The very smallest building should be divided into at least three rooms.

In addition to remodeling the existing building, new additions will in many cases be required. It is advised that all the smaller children's groups at least, be placed in rooms of new construction where the ceiling can be of proper height and the lighting and decoration controlled and designed suitably for children. Older groups may use remodeled spaces in the existing buildings.

Usually it will be found necessary to provide an adequate fellowship hall for the social and recreational activities in the new addition. In writing the building program, the building organization will assemble the statement of requirements and offer certain suggestions to the architect, as to the groups and activities that may be provided in the existing building, if possible, and the other rooms and equipment to be provided in the new addition. Wise and experienced church building counsel can be most helpful in a remodeling and new addition project.

Remodeling projects usually include a complete redecorating program.



XXV ARCHITECTURE AND EVANGELISM

In designing a church building the evangelistic purpose of the Christian religion should be a governing motive. The building is an instrument in the furtherance of the highest human endeavors. It must be shaped to suit the dominant purpose for which it exists or else it is a futile and discouraging instrument.

One might believe that evangelism was not a controlling purpose in many church buildings that ministers have had to use. A very wide auditorium with many hearers out of the range of the speakers eye, terrible acoustics with which preachers had to contend, bad glass or a glare of lights, garish decorations, choirs exhibited and exposed, have had their depressing effect on the sacred ministry of preaching. Disorder and discomfort do not aid the work of the Spirit to secure the devotion and sacrifice of life and possessions. No wonder that Sunday evening services have become a thing of the past in many such atrocious places, (with awful lighting.)

The total task of evangelism, interpreted broadly, involves in its motive and field of work, the Christianizing of life in the whole range of human experience. It includes a constant cultivation of the evangelistic motive in the hearts of church attendants. It includes the enrichment and stabilizing of faith in the believing ones.

The pastor who shepherds his flock from field to field of life enrichment and growth in grace, needs to lead his people through a long series of progressive decisions. The late and greatly beloved F. Watson Hannan said that man is not really a saved man who does not practice justice, equity, cooperation, sympathy good will. (See "Evangelism", F. Watson Hannan). Rent problems, wages, work, sanitary and school problems are all problems of evangelism. Constantly the preacher stands in need of an architectural environment that will reenforce his evangelistic efforts. A suitable church architecture will stimulate and prompt the preacher to ring forth the Christian appeal with ever greater forcefulness. It symbolizes for him the support of his local congregation and of the church at large urging him, sustaining him. Perhaps the power of Canterbury Cathedral helped Thomas A. Becket to defy the king and the king's men.

Dr. Stanley Jones, noted for effective preaching, told the writer that he felt a stimulation for preaching in the wonderfully beautiful Chapel of Duke University, where he followed the sermon with appeals to the listeners to "step forward" to indicate their response to his appeals for definite advances in their personal religious lives.

The chancel plan is conducive to evangelism, not only by removing distractions, but by making it easy and natural for the preacher to step forth from the pulpit to greet persons coming forward, without turning his face away from the congregation.

The pastor who led in the erection of the new Church of God in Lima, Ohio, addressed a group of fellow pastors in these words: "This building is planned with the work of evangelism as the controlling motive. The beauty of the exterior will attract people to the church. The interior design and arrangement will assist the preacher in securing a response to his message and appeals for personal decision by the listeners."

It is impossible to estimate the numbers lost to the churches because of the rank ugliness of innumerable American Protestant Church buildings.

Some people have had a fear that good architecture would destroy fearless prophecy — or else they just wanted to declaim against beauty and order — like a carpenter whom I heard announce, after he spat on the floor while helping set the furnishings in a beautiful sanctuary, "There won't be no religion in this pretty place." Within six months after the opening of this new church 94 new adult members from all economic levels of life in that southern city joined that church. That was nearly 20 years ago. The church is still "going strong."

The truly Christian church will not narrow its field of evangelism to any one group of its possible constituency. An evangelism that will reach people higher up in the economic scale is as essential as a mission to the "down and out." Some Protestant churches have lost immeasurably because their message and appeal have failed to reach many of the so-called more prosperous or cultured groups. Certainly God loves the sinner in the country club or on the golf links as much as the outcast in a slum saloon.

The poorest of the poor will respond to beauty but both poor and rich are repelled by ugliness. It would seem that in designing the churches of a former generation this fact, demonstrated a thousand times in church history, has totally been disregarded.



- CIBORIUM -
- THE LAST SUPPER -



- THE PHOENIX -
- THE RESURRECTION -

XXVI A CHECK LIST

It is the purpose of the church building program to enable the architect to prepare drawings that will result in a thoroughly satisfactory and adequate building. (See chapter (XIX) This statement of requirements even if carried out to complete detail leaves a very great deal of work for the architect to do. It will be to his advantage of course if he has had experience in planning modern Protestant churches.

If he has not had experience in such work, it would pay him to have the church employ a consulting architect to prepare the preliminary outline plans and to revise the same until a thoroughly satisfactory plan and exterior design has been developed. Then a highly competent architect who has had limited experience in church work can carry on the work with a considerable saving of time which he otherwise would have to spend in research and in revising and re-revising the outline plans.

No matter how completely the statement of needs has been prepared by the church, the architect will need to examine and note the results of the use in church building of hundreds of materials and pieces of equipment. He must enter into the whole world of religious art and be able to give the church adequate and completely satisfactory guidance in the matter of glass and mechanical equipment such as heating, ventilating, etc., suitable for church work the requirements of which are very different from that of any other type of building.

We trust the architect to know about the laws of sound so that each room in the building will have proper acoustical condition in keeping with the purpose of the room. However, if one is on a church committee, he will wish to be assured in his own mind as to the satisfactory solution of all problems of plan and fitments. Each member of the plans and construction committee as well as those on the program committee, who are to help approve the plans will have their own private check lists on which such items as the following may be found, which each will wish to be confident that the right solutions have been provided.

OVERSIGHTS CAN BE AVOIDED —

Here are just a very few items to indicate the check list of one committee member who is especially concerned for the church school facilities:

1. Is the provision for coat rooms for each department adequate and suitable? (Check and double check).
2. Are the windows at proper height for children of different ages and sizes?

3. Are there sufficient electric outlets for using floor lamps where possibly needed and for using projection equipment? Wiring for house phone system? For sound pictures, For cleaning equipment?

4. Is it necessary to pass through any room in order to reach another room;

5. Will the heating plant provide for heating one or two rooms separately when required? Which rooms?

6. Describe complete lighting effects for chancel; nave; stage; chapels?

7. Church bell? Chimes?

8. Height of middle of chancel above nave? Of pulpit? Of choir pews?

9. Report of acoustical engineer for all rooms?

10. Width of aisles.

11. Type of construction (sound proof) of partitions?

12. Lavatories. Check and check again.

13. Provisions for preparing flowers. Storage of vases.

14. Electric outlets outside of building?

15. Drinking fountains.

16. Flooring of all rooms.

17. What rooms for multiple use?

18. Storage space.

The check list may also help guard against the introduction of things that are not wanted such as annoying signal bells and other distracting things that had better be excluded.

A FEW IMPORTANT BOOKS

Short, Ernest H.: History of Religious Architecture. Excellent. 334 pages. Non technical. Illustrated.

Vogt, Von Ogden: Art and Religion. 1921, 263 pages.

A sympathetic modern and Protestant appraisal of the historic and artistic background of public worship. Most important.

Fletcher, Banister: History of Architecture.

Non-technical, hundreds of illustrations.

Hamlin: History of Architecture.

Hamlin: The Enjoyment of Architecture.

Bond, Francis: English Church Architecture.

Byron, R.: The Byzantine Achievement, 345 pp. Knopf, N. Y., 1937. Extensive bibliography.

Connick, Chas. J.: Adventures in Light and Color, Random House N. Y., 1937. A remarkable monumental volume — indispensable in the field of stained glass.

Saint, Lawrence B., and H. Arnold: Stained Glass, A. & G. Black, Odgers and Schultz: The Technique of Public Worship.

Another excellent manual by leaders working for better worship.

Sperry, Willard L.: Reality in Worship.

Underhill, Evelyn: Worship.

A profound, scholarly and philosophical study of the inner realities of worship rather than its outward forms, by a great English mystic.

Devan, S. Arthur: Ascent to Zion—Macmillan Co., 1942.

Excellent, comprehensive, practical, well indexed, Bibl'y.

Webber, F. R.: Church Symbolism. Best available book on Christian symbolism. Jansen, Cleveland, Ohio.

Stafford, Thos. A.: Christian Symbolism in the Evangelical Churches. Abingdon-Cokesbury Press, 1942. Excellent.

Paulsen, Irwin G.: The Church School and Worship.

Competent, comprehensive, and practical. Bibliography.

Covers much wider field than title indicates.

Palmer, Albert W.: The Art of Conducting Public Worship.

Palmer, A. W.: Come Let Us Worship — Macmillan, 1941. For smaller churches.

The Church Beautiful—Scotford Pilgrim Press. 1945. Suggestive especially for remodeling. Many illustrations. 162 pages.

The Biography of a Cathedral. R. G. Anderson. Longmans, Green, 1945. 484 pages of Remarkable story of the ages of Norte Dame of Paris extensive index.

Planning Church Buildings, \$2.00 and other literature from the Interdenominational Bureau of Architecture, 297 Fourth Avenue, New York 10, N. Y. (Send card for extensive list).

SOME WORDS BELONGING TO THE CHURCH

Aisles. Spaces outside the row of columns in a building with clerestory. There may be seats in these spaces.

Altar. Not to be used if the object referred to is a communion table.

Apse. A semi-circular or polygonal termination of a choir or chancel.

Baptistry. That part of a church set apart for the administration of baptism. Often, in the Old World, a separate building.

Baroque-Rococo. A style of decoration distinguished by scrolls, etc., following the Renaissance. Tended to become extravagant in frivolous ornamentation.

Basilica. In early Christian times a church that more or less retained the plan of halls originally erected for legal or business meetings.

Belfry. A ringing room or part of a church tower containing bells. Formerly a detached tower for bells.

Belle Cote. A place where one or more bells are hung on buildings which do not have towers.

Byzantine. The style evolved in Byzantine in the 5th Century A.D. marked by the dome, wide-spreading round arches, and often elaborate color, ornamentation and mosaics.

Campanile. Tower not attached to a building.

Chancel. The portion of the church set apart for the clergy and choir.

Clerestory. The wall that rises above the roof over the side aisles when the middle of the nave is higher than the roof at the sides. This wall usually has windows.

Cloisters. Covered passages.

Column. A pillar including its base, shaft and capital.

Communion rail. A railing used at some churches at which communicants or other worshipers kneel. Not properly called an altar.

Dossal or Dorsal. A hanging of fabric behind an altar or table.

Fenestration. The whole system and arrangement of windows and other wall openings.

Gothic. A term of contempt applied to medieval architecture by enthusiasts for the Renaissance. The Gothic, not strictly a style, applies to the spirit of architectural design during the 13th to 15th Centuries. Marked by the prominence of the vertical note in which all elements seem to mount ever upward, expressive of spiritual nobility, capable of infinite variety of detail in plan and design.

Georgian-Colonial. Work in America inspired by the Georgian classic, revival in England (1714 onward). Many elements carried over from Italian and other Renaissance influences.

Mensa. The top or table part of an altar.

Narthex. The vestibule or closed-in porch across the building at the rear of the nave.

Nave. From "Navis" (L) a ship, the part of the church in which the congregation is seated on the main floor, or in a clerestory church, the part of the building between the columns that support the clerestory walls.

Norman. The style in England preceding the Early English (Gothic) and corresponding to the Romanesque on the Continent.

Renaissance. Designs resulting from the revival of classic forms in Europe in the 15th and 16th Centuries and following. Many elements of classic temples recalled. Used much for civic buildings.

Romanesque. Developed by Christian builders from the Roman Basilica and the Byzantine. Featured by heavy piers, round arches.

Rood Beam. A beam at the line between the nave and chancel supporting, or from which was hung a cross.

Reredos. Ornamental screen back of an altar.

Retable. A kind of shelf or table rising a short space above the back part of the altar. A gradin.

Sacristy. A small room for keeping sacred vessels, vestments, books.

Transept. That part of the church across the nave in front of the chancel and extending beyond the sides and forming the ends of a cross.

A LIST OF SOME INTERESTING CHURCH BUILDINGS

(Erected during the past thirty years or so)

ABOUT VISITING CHURCHES

"Please send a list of churches we may visit to gain ideas for our new building program." So writes the secretary of a Building Council. While we have seen most of the church buildings in the country, we do not know one that should be copied in its entirety by the architect of this client. There is a church one hundred miles distant that has an excellent kitchen and an interesting exterior design. The rest of the building has many inadequacies, and its good features would be unsatisfactory for a church in another location. Often it is more profitable to spend the time that would be required to visit buildings, in more adequate study of the church program needed at home.

We place the churches named on the following list because they have some interesting features that would repay the time required for a visit, if one were in the vicinity. A visit to some of them would be well worth the expense, the time and effort required to travel even a great distance. This is by no means a complete list of notable or interesting American churches. Each churchman would, if asked to assemble such a list, have his own individual preferences as to the edifices to be mentioned.

The writer welcomes suggestions for further listings. A complete classified catalog of commendable American church buildings should be assembled, if the time and money necessary to do such work could be found.

Alabama

Montgomery, Central Christian, First Methodist.

Arizona

Phoenix, Congragational.

Tucson, First Methodist.

California

Bakersfield, First Baptist, First Christian Science.

Berkeley, First Congregational.

Glendale Congregational Forest Cemetery, three chapels.

Hollywood, First Methodist.

Los Angeles, First Congregational, Thirteenth Christian Science, Twenty-Eighth Christian Science (exterior and grounds), Wilshire Boulevard Christian, Wilshire Methodist, Westwood Methodist.

North Glendale, Methodist.

Orland, Federated.

Pasadena, All Saints Episcopal, First Lutheran, First Methodist (certain features).

Petaluma, Methodist.

Sacramento, First Methodist, Westminster Presbyterian.

San Diego, St. Joseph's Cathedral, Roman Catholic.

San Francisco, Grace Cathedral, Episcopal; Temple Emmanu-El

Colorado

Denver, First Baptist, Episcopal Cathedral.

Connecticut

Bridgeport, First Methodist, United Congregational.

Cannan, St. Josephs Roman Catholic.

Danbury, Christian.

Hartford, Asylum Hill Congregational (chapel and Connick glass), Trinity College Chapel.

New Haven, St. Thomas More Chapel, Roman Catholic (modern).

Waterbury, Bunker Hill, Congregational.

West Hartford, First Congregational, St. John's Episcopal.

Delaware

Dover, People's Congregational-Christian; Presbyterian.

Newark, Methodist (remodeled).

Wilmington, First Presbyterian

District of Columbia

Church of God, 16th and Taylor

Reformation, Lutheran

Washington Cathedral, Episcopal (on Mt. St. Albans).

Metropolitan, Methodist.

Florida

Jacksonville, Good Shepherd, Episcopal; Riverside, Presbyterian.

Miami, Temple Israel.

West Palm Beach, Bethesda-by-the-Sea, Episcopal.

Georgia

Atlanta, Christ the King, Roman Catholic (design and glass); Educational Building, Emory University, Methodist; Druid Hills, Presbyterian; Druid Hills, Baptist.

Illinois

Chicago, Bryn Mawr Community, First Unitarian, Fourth Presbyterian, Temple Israel, Trinity Methodist, (Beverly Hills), University of Chicago Chapel.

Evanston, First Methodist, First Congregational.

Highland, First Congregational.

LaGrange, Emmanuel Episcopal.

Moline, First Congregational.

Oak Park, Methodist, Good Shepherd Lutheran.

Springfield, First Presbyterian (remodeled sanctuary).

Wilmette, Methodist.

Indiana

Anderson, First Methodist (remodeled sanctuary).
Aurora, Baptist.
Bloomington, Christian.
Columbus, Tabernacle Christian (modernistic, cost \$700,000.).
Fort Wayne, Trinity Lutheran.
Gary, First Methodist.
Hammond, United Brethren.
Indianapolis, Broadway Methodist, Irvington Presbyterian, Tabernacle.
Presbyterian.
Whiting, Methodist.
Mishawaka, First Evangelical.
Muncie, High Street Methodist.

Iowa

Clinton, Presbyterian. Conard, Methodist.
Des Moines, Plymouth Congregational.
Forest City, Immanuel Lutheran.
Belle Plain, Methodist.

Kansas

Oakland, Methodist.
Kansas City, Central Christian.

Kentucky

Lebanon, Methodist.
Newport, St. John's, Congregational, St. Stephen's Roman Catholic.
Ft. Thomas, St. Thomas Roman Catholic.

Maine

Lewiston, Bates College Chapel.

Maryland

Baltimore, Immanuel Lutheran.
Chevy Chase, Presbyterian and Methodist.
Frederick, Calvary, Methodist.
Glyndon, Methodist.

Massachusetts

Boston, Jamaica Plain Congregational.
Medford, Baptist.
Springfield, Trinity Methodist.
West Newton, Second Congregational.
Winchester, Congregational.
Worcester, First Baptist, All Saints, Episcopal, Wesley Methodist.

Michigan

Albion, First Christian Science
Ann Arbor, First Methodist, First Presbyterian.
Cranbrook, Christ Episcopal.
Detroit, Bushnell Congregational, Jefferson Avenue, Presbyterian, Nardin Park, Methodist, Woodward, Christian.
Grand Rapids, East Congregational (Chapel), First Methodist.
Kalamazoo, Congregational, First Methodist (sanctuary).
Marquette, First Presbyterian.
Muskegon, Central Methodist.

Minnesota

Alexandria, Congregational.
Duluth, St. Paul's, Episcopal.
Hibbing, Methodist.
Minneapolis, Mayflower Congregational, Oakland, Evangelical, Hennepin Ave. Methodist (Art gallery, Connick glass), St. Autin's Roman Catholic (Modernistic), St. Mark's Episcopal.
St. Paul, House of Hope, Presbyterian.

Missouri

St. Louis, Church of Our Savior, Lutheran, Second Christian Science.
St. Marks Episcopal

Montana

Great Falls, First Presbyterian.
Helena, Episcopal Cathedral, Roman Catholic Cathedral.

Nebraska

Grand Island, Trinity, Methodist.
Lincoln, First-Plymouth, Congregational, very interesting.
Omaha, St. Paul's, Methodist.

Nevada

Boulder City, Federated.
Reno, First Methodist.

New Hampshire

Claremont, Methodist.
Hanover, Congregational.
Peterborough, All Souls, Episcopal.

New Jersey

East Orange, Baptist.
Flemington, Baptist.
Montclair, First Christian Science, First Baptist, First Presbyterian.
Patterson, Broadway Baptist.
Plainfield Crescent Presbyterian, First Baptist.
Princeton, University Chapel.
Red Bank, Methodist.
National Park, Methodist.

New York

Albany, Trinity Methodist.
Brooklyn, Hanson Place, Methodist.
Bronxville, Reformed.
Buffalo, St. John's Episcopal, Trinity, Episcopal.
Far Rockaway, Sage Memorial, Presbyterian.
Glens Falls, First Presbyterian.
Mechanicsville, Methodist (glass).
Mt. Kisco, St. Mark's Episcopal
New York City, Cathedral of St. John the Divine, Episcopal; Chapel of the Intercession, Episcopal (excellent); Christ Methodist (Park Avenue at 60th); Church of the Heavenly Rest, Episcopal, (5th Ave. at 90th); First Christian (Park Avenue at 64th); Riverside Baptist, (Riverside at 122d); St. Bartholomew's, Episcopal (Park Avenue at 50th) (New glass by Connick, superb.); St. Thomas', Episcopal (excellent); St. Vincent Ferrer, Roman Catholic, 869 Lexington Ave.; Temple Emmanu-El, Jewish, (Fifth Ave. at 65th) (special, glass and chapel).
New Rochelle, First Presbyterian.
West Point, Military Academy Chapel.
White Plains, Church of the Highlands, Congregational.

North Carolina

Chapel Hill, Sprunt Chapel.
Concord, Presbyterian.
Durham, Duke University Chapel.
Kings Mountain, Presbyterian.
Winston Salem, Centenary Methodist.

North Dakota

Dickinson, First Congregational.
Fargo, First Presbyterian. Plymouth Congregational.
Grand Forks, Lutheran (modernistic).

Ohio

Cincinnati, Hyde Park Methodist; Knox Presbyterian; Grace Lutheran.
Cleveland, Christ Methodist, Church of the Saviour, Methodist (Cleveland Heights); Cleveland Heights Baptist; Epworth-Euclid, Methodist.
Columbus, First Congregational. Broad St. Presbyterian (remodeled).
Fremont, Lutheran.
Lima, Church of God.
Massillon, St. Paul's Lutheran.
Youngstown, Trinity, (exceptional).

Oklahoma

Tulsa, Boston Avenue Methodist (modernistic); First Methodist.

Oregon

Pendleton, Presbyterian.
Portland, Sixth Christian Science.
Salem, Congregational.

Pennsylvania

Allentown, Muhlenburg College Chapel, Asbury Methodist.
Ardmore, Presbyterian; Roman Catholic.
Bradford, Baptist, Roman Catholic.
Erie, Church of the Covenant, Presbyterian.
Hazleton, Christ Lutheran.
Mercersburg Academy Chapel.
Philadelphia, Chapel of Episcopal Divinity School; Church of the Mediator, Episcopal; First Methodist, Germantown; Roxboro, Leverington, Presbyterian; Immanuel, Lutheran; St. Paul's, Chestnut Hill, Episcopal. Holy Child Roman Catholic (exceptional).
Pittsburg, East Liberty Calvary, Episcopal; East Liberty, First Baptist; East Liberty, Lutheran; East Liberty, Presbyterian; Sacred Heart, Roman Catholic; University of Pittsburgh Chapel.

Rhode Island

Pawtucket, Park Congregational.

South Carolina

Columbia, Lutheran.
Spartanburg, First Presbyterian.

South Dakota

Pierre, SS. Peter and Paul, Roman Catholic (modernistic).
Gaston, Chapel, Sacred Heart Convent.

Tennessee

Knoxville, Church St. Methodist.
Johnson City, First Methodist.
Memphis, Idlewild Presbyterian.
Nashville, Westminster Presbyterian; Sacred College Chapel.

Texas

Dallas, Highland Park Methodist; Highland Park Presbyterian.
Fort Worth, First Methodist.

Vermont

Rutland, Roman Catholic (Christ the King).

Virginia

Richmond, First Baptist.
Virginia Beach, Presbyterian.
Roanoke, Second Presbyterian.

Washington

Ellensburg, Baptist.
Spokane Episcopal Cathedral.
Seattle, University Methodist.

West Virginia

Clarksburg, Immaculate Conception, Roman Catholic.
Wheeling, St. Joseph's, Roman Catholic Cathedral.

Wisconsin

Green Bay, Congregational First Methodist.
Milwaukee, Fourth Christian Science.

Wyoming

Casper, Methodist.
Cheyenne, Presbyterian.
Larimer, Episcopal (log church).
Moose, Episcopal (log church).



Jamaica Plains Congregational Church, Boston.

Collens, Architect

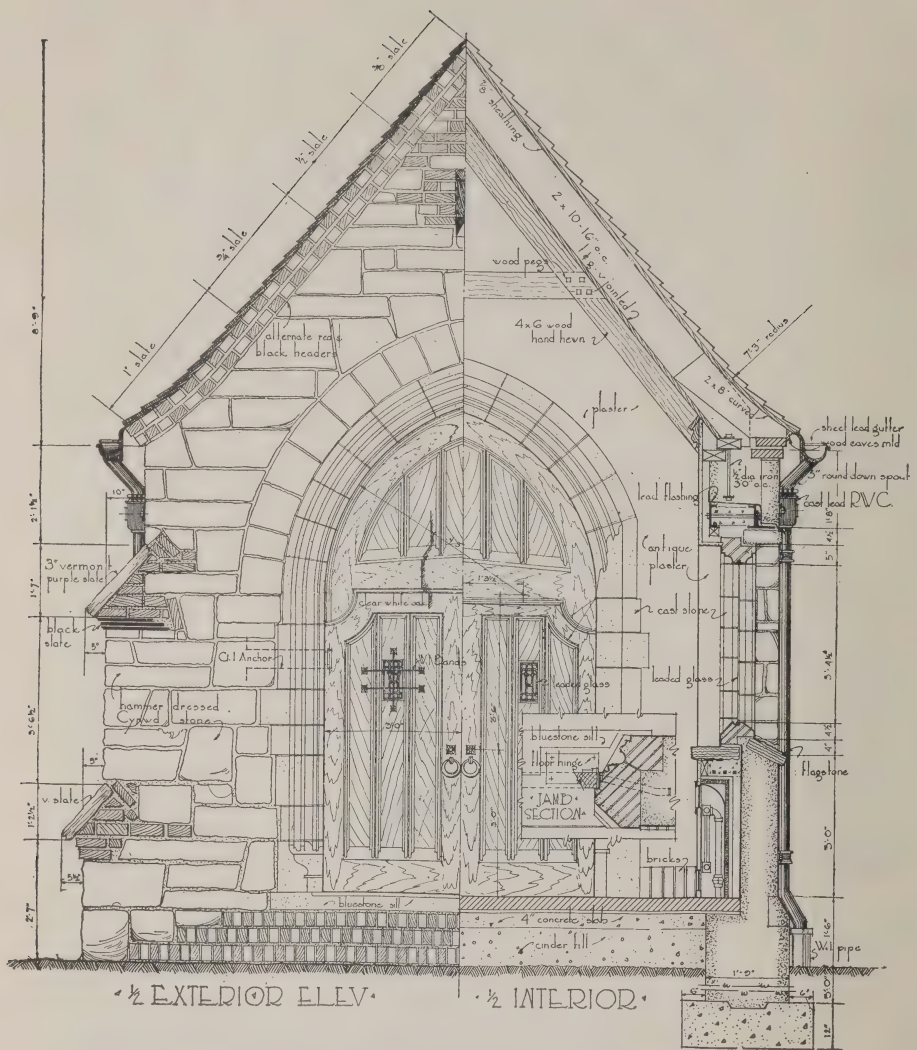
(Titles Reversed)



Congregational Church in the Highlands, White Plains N. Y.

Schultz, Archt.

E. M. Conover, Consultant



WORKING DRAWING OF A DOORWAY.

One may have just a hint here of the tremendous volume of work an architect must do to plan a complete building.

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